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PERSONAL.

Mr. Paul Nash has been appointed City Engineer of Stamford, Conn.

Mr. G. B. Pike has been appointed City Engineer of Kalamazoo, Mich.

Mr. H. C. Thompson, of Sault Ste. Marie, Mich., has been appointed City Engineer of Lansing, Mich.

Mr. Harvey Cockell has been appointed Superintendent of the Water-Works Department of Columbus, O.

Mr. William Neff has been appointed Superintendent of the Breckenridge Division of the Great Northern Ry. Line.

Mr. James Walsh has been elected Vice-President of the Southern Indiana Ry. Co., to succeed Mr. F. B. Ogden, who has resigned.

Mr. John F. Stevens has been reappointed to his former position as Chief Engineer of the Great Northern Ry., succeeding Mr. N. D. Miller.

Mr. J. T. Harahan, Second Vice-President of the Illinois Central R. R., was married April 19 to Miss Mary N. Mallory, of Memphis, Tenn.

Mr. T. Kennard Thompson, M. Am. Soc. C. E., consulting engineer, has removed his office from 11 Broadway to the new Park Row Building, New York city.

Mr. Andrews Allen, until recently Assistant Engineer with the Edge Moor Bridge Works, has taken charge of the Chicago office of the Wisconsin Bridge & Iron Co., with position as Contracting Engineer.

Mr. Charles H. Wright, M. Am. Soc. C. E., Chief of Drafting Department, Edge Moor Bridge Works, Wilmington, Del., has accepted the position of Engineer with the Brown Hoisting & Conveying Machine Co., of Cleveland, O.

Mr. Edmund B. Weston, M. Am. Soc. C. E., Assistant City Engineer and Engineer in Charge of the Water Department, Providence, R. I., has resigned his position in order to devote more time to his practice as consulting engineer.

Mr. Julian C. Smith, formerly of Morton & Smith, engineers and contractors, of Baltimore, Md., has recently moved to New York city, and is the President and Manager of the Hudson Contracting Co., with offices at 2515 Broadway.

Mr. J. B. Gardiner, Superintendent of the Stonington Division of the New York, New Haven & Hartford R. R., has resigned after fifty years of service on account of ill-health. He will be succeeded by Mr. J. V. A. Trumbull, Superintendent of the Valley Division.

Senor Esquerra, Commissioner to Paris of the United States of Colombia respecting the extension of the Panama canal concession, and the Director-General of the canal, sailed from Colon for New York, on their way to Paris, on April 20, on board of the steamship "Allianca."

Mr. E. H. Fitzhugh, Superintendent of the Middle Division of the Grand Trunk System, has been appointed General Manager of the Central Vermont R. R. Mr. Fitzhugh will be succeeded by Mr. George C. Jones, Superintendent of the Wabash R. R. and the Grand Trunk System at St. Thomas, Ont.

Mr. Arthur Manning Waitt, M. Am. Soc. M. E., Master Car Builder of the Lake Shore & Michigan Southern Ry., of Cleveland, O., has been appointed Superintendent of Motive Power and Rolling Stock of the New York Central & Hudson River R. R., to succeed Mr. William Buchanan, who has resigned.

Mr. George B. Preston, M. Am. Soc. M. E. Instructor of Experimental Engineering of Sibley College, Cornell University, of Ithaca, N. Y., has been appointed by Superintendent of Public Works Partridge as Inspector of Boilers for the State of New York, under the inland waters steam navigation law.

Mr. James S. Anthony has been appointed by Commissioner-General Peck as Assistant Director of Machinery and Electricity of the United States Commission to the Paris Exposition of 1900. Until recently Mr. Anthony was the Advertising Manager of the Walker Co., manufacturers of electric machinery, of Cleveland, O.

Mr. William Buchanan, Superintendent of Motive Power and Rolling Stock of the New York Central & Hudson River R. R., has resigned. He was born in Scotland in 1829 and came to America in his youth, entering the mechanical department of this railway at the age of 17. In 1853 he was made Master Mechanic of the Southern Division and in 1883 was appointed to the position from which he has just retired. He has designed many types of locomotives, the most noted of which is engine "999," one of the fastest in the world. The water-scoop which permits moving trains to take water was one of his inventions.

OBITUARY.

Mr. Lovell G. Mickles, civil engineer, of Buffalo, N. Y., died on February 15.

Mr. William Daniel Wiegand, mechanical engineer, died at his home in Baltimore, Md., on April 22, aged 76 years.

Mr. Charles Sheppard Roe, President of the Railway Supply Foundry Co., of Chicago, died on April 19, aged 47 years.

Mr. William J. Stone, Superintendent of the Water-Works of Attleboro, Mass., died of spinal meningitis, on April 18.

Capt. Henry A. Bourne, President of the Old Dominion Line of steamers, died at his home in Brooklyn, N. Y., on April 20, aged 50 years.

Mr. Byron C. Davis, President of the Copper King Mining Co., of Arizona, died at his home in Brooklyn, N. Y., on April 23, aged 40 years.

Mr. Edward Cameron, of St. Louis, Assistant and Supervising Engineer of the U. S. Treasury, died in Philadelphia, of pneumonia, on April 22, aged 38 years.

Mr. John Louis Lay, formerly engineer in the United States Navy, inventor of the torpedo with which Cushing blew up the Confederate warship Albemarle in 1864, and later attached to the Peruvian Navy, died in Bellevue Hospital, in New York city, on April 17.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
May 1. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

ENGINEERING SOCIETY OF WESTERN NEW YORK.
May 1. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
May 3. Secy., C. W. Hunt, 220 W. 57th St., New York city.

WESTERN SOCIETY OF ENGINEERS.
May 3. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

FOUNDRYMEN'S ASSOCIATION (Philadelphia).
May 3. Secy., Howard Evans, Pier 45, N. Delaware Ave., Philadelphia, Pa.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
May 5. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

CHICAGO ELECTRICAL ASSOCIATION.
May 5. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
May 5. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

THE ENGINEERS' CLUB OF PHILADELPHIA.
May 6. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' CLUB OF ST. LOUIS.
May 7. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.

ENGINEERS' CLUB OF KANSAS CITY.
May 8. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

THE LOUISIANA ENGINEERING SOCIETY.
May 8. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

NEW ENGLAND RAILWAY CLUB.
May 9. Secy., Edw. L. Janes, P. O. Box 1158, Boston, Mass.

NORTHWEST RAILWAY CLUB.
May 9. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

DENVER SOCIETY OF CIVIL ENGINEERS.
May 9. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
May 9-12. Spring meeting, Washington, D. C. Secy., F. R. Hutton, 12 West 31st St., New York city.

AMERICAN INSTITUTE OF ARCHITECTS (New York Chapter).
May 10. Secy., Chas. I. Berg, 10 West 23d St., New York city.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
May 11. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.

FRANKLIN INSTITUTE.
May 11. Discussion, "Hydraulic Transmission, Valves and Packing;" May 16. "Recent Progress in the Liquefaction of Gases," Dr. Harry F. Kerre. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

BROOKLYN ENGINEERS' CLUB.
May 11. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

ENGINEERING ASSOCIATION OF THE SOUTH.
May 11. Secy., H. M. Jones, 1000 Broad St., Nashville, Tenn.

WISCONSIN STATE CHEMICAL ASSOCIATION.
May 12. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

ST. LOUIS RAILWAY CLUB.
May 12. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

CENTRAL RAILWAY CLUB.
May 12. Secy., H. D. Vought, 114 Fifth Ave., New York city.

MONTANA SOCIETY OF ENGINEERS.
May 13. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

TECHNICAL CLUB OF OMAHA.
May 15. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
May 15. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
May 15. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
May 16. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
May 16. Annual meeting. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

WESTERN RAILWAY CLUB.
May 16. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA
May 16. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

AMERICAN FOUNDRYMEN'S ASSOCIATION.
May 16-19. Annual meeting, Pittsburg, Pa. Secy., John A. Penton, Buhl Block, Detroit, Mich.

AMERICAN WATER-WORKS ASSOCIATION.
May 16-18. Annual meeting, Columbus, O. Secy., Peter Milne, 95 Williams St., New York city.

BOSTON SOCIETY OF CIVIL ENGINEERS.
May 17. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
May 17. Annual meeting. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF CINCINNATI.
May 18. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
May 18. Secy., F. A. Charpiot, P. O. Box 13, Savannah, Ga.

NEW YORK RAILROAD CLUB.
May 18. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

ROCHESTER ENGINEERING SOCIETY.
May 19. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

THE DETROIT ENGINEERING SOCIETY.
May 19. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.

ENGINEERS' CLUB OF COLUMBUS.
May 20. Secy., H. M. Gates, 12½ North High St., Columbus, O.

NATIONAL ELECTRIC LIGHT ASSOCIATION.
May 23-25. Annual meeting, New York. Secy., Geo. F. Porter, 136 Liberty St., New York city.

NEW YORK ELECTRICAL SOCIETY.—A meeting of this society will be held at the College of the City of New York, New York city, on April 27. The paper for the evening is entitled "Electrical Engineering in Office Buildings," and will be presented by Mr. Reginald P. Bolton. George H. Guy, Secy.

WESTERN SOCIETY OF ENGINEERS.—At the meeting on April 19 (Ladies' Night), Mr. W. J. Karner (Illinois Central R. R.) delivered an informal lecture on "The Abbeys, Cathedrals, Castles and Places of Popular Interest in Europe," which was illustrated by a number of stereopticon views.

THE AMERICAN FOUNDRYMEN'S ASSOCIATION.—The 4th annual meeting of this association will be held at Pittsburg, Pa., on May 16-19. The program includes an interesting list of papers and a number of excursions, including visits to the Westinghouse Air Brake Co., the Homestead Plant of the Carnegie Steel Co., etc.

ROCHESTER ENGINEERING SOCIETY.—A regular meeting of this society was held on April 21. The topic for discussion was "The Steam Engine." The subject was illustrated by drawings and plans of various types of engines, and a model link-motion was exhibited. On April 22, through the courtesy of Mr. Albert R. Pritchard, a party composed of members of the society visited the Rochester Stamping Works.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.—A meeting of this society was held at the Society's House, Pittsburg, Pa., on April 18, 35 members and visitors present. The paper of the evening, entitled "Quick Revolution Engines," was read by Mr. Arthur Herschmann. A finance committee has been appointed with a view of securing funds with which to purchase a permanent home for the society.

WESTERN RAILWAY CLUB.—At the meeting on April 18, the report of the Committee on M. C. B. Couplers was presented by Mr. F. A. Delano (C., B. & Q. R. R.), and it was voted that the report should be sent to the Coupler Committee of the Master Car Builders' Association. The report laid stress upon the fact that the present standard contours are entirely satisfactory, and that greater care should be taken to adhere strictly to them. The report of the Committee on M. C. B. Rules of Interchange was also presented, and most of its recommendations were adopted.

MONTANA SOCIETY OF ENGINEERS.—A regular meeting of this society was held in Helena on April 8. The proposed amendment to Article 5 of the By-laws, presented at the meeting in Butte, was discussed. The proposed change of the headquarters of the society to Butte was discussed, all agreeing that it was advisable to make this change as soon as possible. It was advised that the President appoint a committee to draft an amendment to the constitution and by-laws to provide for this change and that said committee report at the May meeting to be held in Butte. A special meeting will be held in the Public Library, Butte, Mont., on May 13.

A. S. Hovey, Secy.

FRANKLIN INSTITUTE.—A regular meeting of the Mechanical Engineering Section of the Institute was held at Philadelphia, on April 12. The subject for discussion was the "Construction, Operation and Maintenance of Pumping Machinery." The first part of the discussion was devoted to the construction of the water end of the pump and the advisability of using steel valve decks in place of cast-iron, as in present practice. The question of high duty pumps versus the forms in vogue about 1882 was discussed, and it was pointed out that the faults in a large proportion of cases were not in the pumps, but in the accessories, or in the selection of the wrong pump for the particular duty. The question of the cost of fuel was often the determining factor in the character of the

pump. With cheap fuel a high duty pump would be bad engineering. With coal at $20 a ton, as in some localities, a triple expansion engine would be the proper selection. Such machines also demand intelligent supervision, while the simpler duplex, or even single action pumps, could be run with cheaper men and greater economy.

NEW PUBLICATIONS.

THE BROOKLYN WATER-WORKS.—By Arthur S. Tuttle. A Paper Read Before the Brooklyn Engineer's Club, Feb. 3, 1898. Paper; 6 × 9 ins.; pp. 136; illustrated. Address the author, Municipal Building, Brooklyn, N. Y.

This paper gives a fair historical sketch and technical description of the Brooklyn water-works. The discussion on the paper is included in the pamphlet.

WATER-WORKS EXPROPRIATIONS IN CANADA.—By Willis Chipman, C. E. Paper; 6 × 9 ins.; pp. 10. Toronto: The author.

This little pamphlet includes a list of the private waterworks in Canada that have been bought by cities, with the date of purchase, the price paid and how it was determined. For seven cases, where Mr. Chipman has served as engineer for the city or town, a summary of the main facts in the proceedings is given.

A HALF-CENTURY OF SANITATION, 1850-1899. By Wm. Paul Gerhard, C. E. A Paper Read at the Meeting of the Brooklyn Engineer's Club, Feb. 9, 1899. Paper; 6 × 9 ins.; pp. 30. Address the author, 36 Union Sq., New York.

Among the subjects reviewed in this paper are water supply, river pollution, sewage purification, garbage disposal, street-paving and cleaning, public baths and house sanitation. The paper was printed in the "American Architect" for Feb. 25, March 4 and 11, 1899.

GAS AND ELECTRIC LIGHT COMMISSIONERS OF MASSACHUSETTS.—Report for 1898. Boston: State Doc. Paper; 6 × 9 ins.; pp. 210, clviii.; tables.

This report contains the usual collection of valuable statistical and other matter relating to gas and electric lighting in Massachusetts. Action towards municipal ownership for a number of years past is reviewed and statistics are presented for the 16 municipal plants in operation on June 30, 1898. All these plants furnished electricity, and two supplied gas in addition. Two of the electric plants furnished street lighting, only.

TRANSACTIONS OF THE SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS, Vol. VI., 1898.—Edited by Francis T. Bowles, Secretary. New York: Published by the Society. 9 × $11\frac{1}{4}$ ins.; cloth; pp. 216; 120 plates.

This volume is the annual publication of the Society of Naval Architects and Marine Engineers, and contains all the papers read at the last annual meeting held in New York, Nov. 10-11, 1898, which were abstracted in Engineering News for Nov. 17 and 24, 1898. The full minutes of the meetings and discussions of the papers are also included, the whole forming a very valuable collection of information.

ABSTRACT OF LAWS FOR ACQUIRING TITLES TO WATER from the Missouri River and Its Tributaries, with the Legal Forms in Use.—Compiled by Elwood Mead, State Engineer of Wyoming. Bulletin No. 60, U. S. Department of Agriculture, Office of Experiment Station, Washington, D. C. Pub. Doc. Paper; 6×9 ins.; pp. 77.

This compilation should be extremely useful to those wishing to acquire or perfect water rights in the district indicated, and for those studying the general question of irrigation from the governmental side. All irrigation laws except those relating to water titles and the public control of streams are excluded.

THE AMERICAN PAPER AND PULP ASSOCIATION.—Report of the Meeting in New York, Feb. 15 and 16, 1899. Paper; 6 × 9 ins.; pp. 94; illustrated. Address the Association, Times Building, New York.

Besides reports of officers and of the writing paper, book paper, wood pulp and other divisions of the association, this report contains a number of papers on water power and allied subjects by Messrs. J. T. Fanning, F. H. Newell, L. F. Vernon Harcourt, H. M. Wilson, Col. H. M. Chittenden, Geo. W. Rafter and J. Herbert Shedd. The paper by Mr. Fanning, on the "Early Development of Water Power in the United States," was given nearly in full in our issue of March 2.

AMERICAN SOCIETY OF MUNICIPAL IMPROVEMENTS.—Proceedings of the Fifth Annual Convention, Held at Washington, D. C., Oct. 26-8, 1898. Allegheny, Pa.: D. L. Fulton, Secretary. Paper; 6 × 9 ins.; pp. 244; tables, illustrations in the text and on folding sheets. Price, $1.

This report contains a large amount of practical information on water supply, sewerage, streets and pavements, garbage disposal and other matters. The information is embodied in 14 papers and seven committee reports by engineers, city officials and others of national reputation. Abstracts of the papers, reports and discussions were given in our issue of Nov. 3, 1898, which contained a report of the meeting.

LOCAL GOVERNMENT BOARD.—Report for 1897-8. London: Eyre & Spottiswood. Paper; 6×9 ins.; pp. CLXXXVI., 631; many tables. Price, $4\frac{1}{2}$ shillings.

The English Local Government Board is a central administrative body with quite large powers of control over the local governing bodies of England and Wales. Aside from the various affairs coming under its direct supervision it wields a great influence in nearly all lines of municipal activity through the approval or vetoeing of loans and the auditing of accounts. The matters in this volume of most interest to engineers are the reports on the eight metropolitan water companies. These reports set forth the principal operations of the several companies during 1897, and give the results of numerous water analyses by Sir Edw. Frankland. Maj.-Gen. de C. Scott is Water Examiner.

PUBLIC WORKS DEPARTMENT, SOUTH AUSTRALIA.—Report for the year ending June 30, 1898. J. G. Jenkins, Commissioner; Alex. B. Moncrieff, M. Inst. C. E., M. Am. Soc. C. E., Chief Engineer, Adelaide, S. A.: Pub. Doc. Paper; 9 × 13 ins.; pp. 73; folding plates.

This report reviews briefly the engineering and financial operation of numerous water supply, irrigation, sewerage and other undertakings in charge of the department. A new storage reservoir is being built for the Beetaloo district, with a capacity of about 1,500,000,000 gallons. It will be formed by an earth dam, 76 ft. high and 1,085 ft. long. Pipe lines 24 ins. in diameter and $14\frac{1}{4}$ miles long and 18 ins. in diameter and $16\frac{1}{2}$ miles long, are being built as a part of the improvements in progress.

METHODS OF MINING ORE IN THE LAKE SUPERIOR REGION, by Dr. Nelson P. Hulst, General Manager of the Oliver Iron & Mining Co, Milwaukee, Wis.

The February number of the "Proceedings of the Engineers' Society of Western Pennsylvania," contains a valuable paper with the above title covering some 40 pages of the journal, and illustrated by half-tone views and drawings. The paper is, perhaps, the most complete presentation of modern mine engineering practice in the Superior iron producing district that has ever been presented. Copies of this number of the journal can be obtained by remitting 50 cts. to Mr. A. G. McKenna, the Secretary of the Society, 410 Penn Ave., Pittsburg, Pa.

THE MOMENT PLANIMETER OR INTEGRATOR and its Application in Civil Engineering. By Fred. Morley, M. Am. Soc. C. E., Professor of Civil Engineering, Purdue University, Lafayette, Ind. Paper; 6 × 9 ins.; pp. 32; illustrated.

The ordinary planimeter, for measuring the area of any irregular shaped plane figure, has become familiar to steam engineers through its use for measuring indicator cards, and its convenience and value for many other purposes are gradually becoming generally known to engineers generally, although it is still far from being appreciated as it should be.

The moment planimeter, however, which is described in the pamphlet before us, is almost unknown in the engineering profession, the only field in which it has come into extensive use being naval architecture. Prof. Morley shows in this pamphlet that this instrument is capable of solving many problems of ordinary engineering practice, and to prove a great labor-saving instrument. The moment planimeter can not only determine the area of any plane figure, but also its static or area moment and its moment of inertia about any axis in the plane of the figure. Prof. Morley explains the construction of the instrument, and gives directions for its use in measuring the moment of inertia of structural sections for columns, beams, etc., in measuring the volume of any solid of revolution, in determining the bending moment, slope and deflection of loaded beams and girders, in the graphical solution of arches and in the calculation of excavation and embankment quantities. The discussion is necessarily largely mathematical, but this treatment is necessary to make clear to the reader the operation of the instrument and the manner by which it reaches a correct solution. Copies of the pamphlet can be obtained from Prof. Morley on request.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: $3\frac{1}{2}$ x 6 ins. and 9 x 12 ins.)

STREET DRAINAGE SUPPLIES.—Geo. M. Pierce, 315 American Trust Building, Cleveland, O. Celluloid; 8 × 6 ins.; pp. 12; illustrated.

This is a catalogue of catchbasins, sewer inlets and catchbasin traps invented and manufactured by Mr. Pierce.

ILLUSTRATED INDEX.—The Watson, Stillman & Co., New York city. Pamph.; 6 × 9 ins.; pp. 26; illustrated.

This pamphlet is a collection of minature illustrations of the various machines of all sorts manufactured by this concern.

ENGINEERING AND SURVEYING INSTRUMENTS.—Stackpole & Bro., 41 Fulton St., New York. Paper; 6 × $4\frac{1}{2}$ ins.; pp. 27; illustrated.

This is both a price list and descriptive catalogue of the various instruments made by this firm for a variety of engineering and surveying purposes.

ARTESIAN WELLS.—J. P. Miller & Co., 45 Michigan St., Chicago. Paper; $3\frac{1}{2}$ × $5\frac{1}{2}$ ins.; pp. 16.

This catalogue contains a brief statement regarding the advantages of artesian wells and the work the company now has in progress; also a list of wells put down by the company, with depths, location and owners.

STOP AND WASTE COCKS.—Farnam Brass Works, Cleveland, O. Pamph., $7\frac{1}{2}$ × $5\frac{1}{4}$ ins.; pp. 50; illustrated.

This is an illustrated price list of brass stop, waste and curb cocks with removable handles. Hose fittings and gas meter and service cocks are also included.

INSTANTANEOUS WATER HEATERS.—The Day-Work Co., Warren, O. Pamph.; $7\frac{3}{4}$ × $5\frac{1}{4}$ ins.; pp. 12; illustrated.

This pamphlet calls attention to a form of water heater intended for baths, kitchens, barber shops and other places where a compact apparatus for rapidly heating water is required.

ELECTRIC PROPELLER FANS.—B. F. Sturtevant Co., Boston, Mass. Circular, 8 × $10\frac{1}{2}$ ins.; illustrated.

This circular illustrates a type of disk ventilating fan employing a special form of propeller blade and a very compact electric motor. It is made in sizes from 18 ins. to 120 ins., with capacities from 2,000 to 1[illegible] cu. ft. per minute.

WATER LIFTS.—The Cleveland Faucet Co., 15 Frankfort St., Cleveland, O. Paper; 3 × 6 ins.; pp. 8; illustrated.

This pamphlet describes an automatic device for forcing cistern water through a house, or increasing the pressure of regular water supplies by utilizing water under pressure from the city mains.

CARBONIZING COATING.—The Goheen Manufacturing Co., Canton, Ohio. Paper; 9 × 6 ins.; pp. [illegible]; illustrated.

We here have illustrated from photographs a number of buildings, bridges, coal-hoisting plants, elevated railways, etc., which have been treated with the carbonizing coating made by this company.

AUTOMATIC GEAR CUTTERS.—F. H. Bultman & Co., Cleveland, O. Pamph.; $6\frac{1}{2}$ × $4\frac{3}{4}$ ins.; pp. 32; illustrated.

This small pamphlet illustrates and briefly describes several forms of automatic gear cutting machines manufactured by this concern, and gives some interesting data relative to calculating gears, and gear cutting.

DISINFECTING MACHINERY. — Kensington Engine Works, Ltd., Francis Bros., 704 Arch St., Philadelphia. Paper; 6 × 9 ins.; pp. 40; illustrated.

Steam disinfecting plants of this type are now used at a number of hospitals, quarantine stations and elsewhere. The several styles of disinfectors are described and a number of actual plants are shown in the illustrations.

FRICTION CLUTCH PULLEYS.—Hess, Snyder & Co., Massillon, O. Pamph.; 6 × 9 ins.; pp. 54; illustrated.

This is an illustrated price list of the friction clutch pulley manufactured by this concern, and includes lists of split and clamp hub iron pulleys, shafting hangers, couplings, and cold-rolled shafting. A few pages at the end are devoted to 'Boomer" furnaces, ranges and stoves.

GAS BLAST FURNACES AND HEATING MACHINES.—American Gas Furnace Co., New York city. Pamph.; $11\frac{3}{4}$ × $8\frac{3}{4}$ ins.; pp. 92; illustrated.

This pamphlet affords a very clear idea of the application of gas blast furnaces to various manufacturing processes. The advantages of gas tempering and annealing machines and gas forges are briefly set forth and illustrations of a number of such special furnaces are given.

A FEW WORDS ABOUT MECHANICAL STOKERS.—Westinghouse, Church, Kerr & Co., Pittsburg, Pa. Pamph.; 9 × $6\frac{3}{4}$ ins.; pp. 34; illustrated.

This is an attractive illustrated description of the new Roney mechanical stoker. The details of this stoker are well shown, and its desirable features are pointed out briefly. The pamphlet also includes several illustrations of boiler plants employing this type of mechanical stoker.

VALVES, HYDRANTS AND WATER-WORKS SUPPLIES.—J. A. Thompson & Co., the Union Hydraulic Works, Van Horn and Sophia Sts., Philadelphia. Paper; 5 × 8 ins.; pp. 48; illustrated.

This pamphlet describes fire hydrants, pressure gages, various kinds of valves, expansion joints, railway water columns, water pressure regulators, manhole covers, cast-iron specials and other goods manufactured or sold by this company.

WATER, STEAM AND GAS SUPPLIES.—The Michigan Brass & Iron Works, Detroit, Mich. Paper; 6 × 9 ins.; pp. 92; illustrated.

This pamphlet is devoted chiefly to fire hydrants and the large and varied line of valves made by this company. A view each of the U. S. Battleship "Iowa" and of the U. S. cruiser "Brooklyn" are shown, with the statement that these vessels are equipped with "Michigan" extra heavy all-brass valves.

LIGHTNING ARRESTERS.—Westinghouse Electric & Mfg. Co., Pittsburg, Pa. Pamph.; 7 × 10 ins.; pp. 24; illustrated.

This pamphlet is numbered 223, and is published to illustrate the developments in Westinghouse lightning arresters since circulars 169-B and 193-A, both of which it supersedes. Arresters for direct and alternating currents, and for lighting, power transmission and railway work are included.

ROCK DRILLS.—The Ingersoll-Sergeant Drill Co., Havemeyer Building, New York. Paper; 9 × $3\frac{7}{8}$ ins.; pp. 14; illustrated.

This pamphlet tells how the Ingersoll-Sergeant drills have found their way to all civilized countries, and points out how the use of rock drills of modern types has increased the amount of rock excavating for various purposes, by making such work easier and less expensive. The facilities and experience of this company in making rock drills and the actual economy in using rock drills are dwelt upon.

RAIL JOINTS.—American Rail-Joint & Mfg. Co., 219 Superior St., Cleveland, O. Paper; $8\frac{3}{4}$ × 4 ins.; pp. 72; illustrated.

The "American" joint is a wedge device, the two pieces locking together under the rail by a dovetail joint. The side portions do not touch the web of the rail, but one piece has two lugs or studs which engage with holes in the web. In some of the joints the studs extend beyond the rail and have hooked ends locking with projections on the opposite part of the joint. Each joint is complete in two pieces, and various patterns are made for railway and street railway track. A similar device, but made in three pieces, forms a guard rail clamp and brace.

MECHANICAL FILTERS.—The New York Filter Mfg. Co., 26 Cortlandt St., New York. Paper; 6 × 9 ins.; pp. 70.

The bulk of this pamphlet consists of reprints of papers and reports, given in whole or partly, on mechanical fil-

tration. The leading paper is "Man's Imitation of Nature in Purification of Water," by Dr. Gardner T. Swarts. Secretary of the Rhode Island State Board of Health. Other papers or reports relate to water purification experiments at Providence, R. I., Cincinnati and Lorain, O., by Messrs. E. B. Weston, G. W. Fuller and Allen Hazen, respectively. The pamphlet also contains numerous testimonials from water-works officials who have charge of mechanical filters, and a list of filter plants, with capacities, in 126 cities, mostly in the United States and Canada.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened. Work. Place. See Eng. News.

Apr. 27. Hospital building, Richmond, Ind. ....Apr. 20
Apr. 27. Fair building, Easton, Pa. ....Apr. 20
Apr. 27. Heating and ventilating, Washington, D.C. Apr. 20
Apr. 27. Steam heating, etc., Raleigh, N. C.......Apr. 20
Apr. 27. Asphalt and granite paving, etc., Newark. Apr. 20
Apr. 27. Sewer system, Tybee Island, Ga..........Apr. 6
Apr. 27. Pier of aqueduct bridge, Georgetown, D.C.. Mar. 30
Advertised, Eng. News, Mar. 30 to Apr. 20.
Apr. 27. Removing reservoir, New York, N. Y.....Apr. 13
Apr. 27. U. S. building repairs, Detroit, Mich.....Apr. 13
Apr. 27. School building, Passaic, N. J. ....Apr. 13
Apr. 27. Electric lighting, Mechanicsburg, Pa.....Apr. 13
Apr. 27. Sheet asphalt paving, Meriden, Conn.....Apr. 13
Advertised, Engineering News, Apr. 13.
Apr. 27. Church building, Newport News, Va....Apr. 27
Apr. 27. Macadamizing, Boston, Mass............Apr. 27
Apr. 27. Water department supplies, Richmond, Va. Apr. 27
Apr. 28. Underground wire, New Haven, Conn....Apr. 27
Apr. 28. School building, Sharon, Mass. ....Apr. 27
Apr. 28. Sewers and paving, E. St. Louis, Ill....Apr. 27
Apr. 28. Granite paving blocks, Providence, R. I.. Apr. 27
Apr. 28. Paving brick, Ithaca, N. Y..............Apr. 27
Apr. 28. Brick paving, etc., East St. Louis, Ill....Apr. 27
Apr. 28. School building, Dubois, Pa.............Apr. 27
Apr. 28. Water tanks, etc., Pipestone, Minn.......Apr. 6
Apr. 28. Broken stone, New York, N. Y...........Mar. 30
Advertised, Eng. News, Mar. 30 to Apr. 20.
Apr. 28. Reservoir, Cincinnati, O. ....Mar. 30
Advertised, Eng. News, Mar. 30 to Apr. 27.
Apr. 28. Water mains, Cincinnati, O..............Mar. 30
Advertised, Eng. News, Mar. 30 to Apr. 27.
Apr. 28. Hydrant jackets, lead, etc., Minneapolis. Apr. 20
Apr. 28. Paving materials, etc., New York,........Apr. 20
Apr. 29. Bridge work, Seneca, Ill. ....Apr. 20
Advertised, Engineering News, Apr. 20.
Apr. 29. Building plans, New Haven, Conn. ......Mar. 23
Apr. 29. Hospital building, Carthage, O. ....Apr. 13
Apr. 29. Soldiers' Home buildings, Danville, Ill.. Apr. 27
Apr. 29. Photographic supplies, Washington .....Apr. 27
Apr. 29. Brick paving, Knox, Ind. ....Apr. 27
May 1. Pipe sewers, Braddock, Pa. ....Apr. 27
May 1. Sewers, Toledo, O.......................Apr. 27
May 1. Public bath, Albany, N. Y...............Apr. 27
May 1. School building repairs, New York........Apr. 27
May 1. School building, Allegheny, Pa. ....Apr. 27
May 1. Hospital building, Somerset, Pa..........Apr. 27
May 1. School building, Spring Garden, Pa......Apr. 27
May 1. Heating and ventilating, Ironwood, Mich.. Apr. 27
May 1. Repairing bridge, Doylestown, Pa. ....Apr. 27
May 1. Parkway, Boston, Mass. ....Apr. 27
May 1. Brick paving, sewer, etc., Albany, N. Y.. Apr. 27
May 1. Paving, Cambridge Springs, Pa. ....Apr. 27
May 1. Brick paving, etc., Louisville, Ky.........Apr. 27
May 1. Water-works, Ute, Ia. ....Apr. 27
Advertised, Engineering News, Apr .27.
May 1. Street grading, Santa Cruz, Cal. ....Apr. 27
May 1. Railroad grading, Lumberton, N. C......Apr. 27
Advertised, Engineering News, Apr. 27.
May 1. College buildings (2), Walla Walla, Wash. Apr. 27
May 1. Sewers, etc., Albany, N. Y................Apr. 27
May 1. School building, Schenectady, N. Y. ......Apr. 13
May 1. Brick and pipe sewers, Logansport, Ind...Apr. 13
May 1. City hall, Lake City, Minn...............Apr. 13
May 1. Brick paving, Benwood, W. Va...........Apr. 13
May 1. Interior building work, St. Paul, Minn.....Apr. 13
May 1. School bonds ($67,000), Council Bluffs, Ia.. Apr. 13
May 1. Bridge substructure, Winchester, England. Apr. 13
May 1. Market hall, Stockton-on-Tees, England.. Apr. 13
May 1. Water bonds, Stayner, Ont. ....Apr. 13
May 1. Brick paving, Bradford, Pa. ....Apr. 13
May 1. Electric and water plant, Cullman, Ala...Mar. 30
May 1. Rip-rap embankment, Two Harbors, Minn. Apr. 6
Advertised, Eng. News, Apr. 6 to 27.
May 1. Extending electric plant, Barrie, Ont.....Apr. 20
May 1. Water-works, College Hill, O. ....Apr. 20
May 1. Bridges (3), Bethany, Mo. ....Apr. 20
May 1. Sewers, Williamsport, Pa. ....Apr. 20
May 1. Water pipe, Martinez, Cal...............Apr. 20
May 1. Steel vault, Montgomery, Tex. ....Apr. 20
May 1. Brick paving, Williamsport, Pa. ....Apr. 20
Advertised, Engineering News, Apr. 20.
May 1. Cement sidewalks, etc., Middletown, Ind.. Apr. 20
May 1. Collecting garbage, Chicopee, Mass........Apr. 20
May 2. Pipe sewers, Olean, N. Y. ....Apr. 20
Advertised, Engineering News, Apr. 20.
May 2. Brick sewers, Hammond, Ind..............Apr. 20
May 2. Church building, Spartanburg, S. C.......Apr. 20
May 2. Dumping carts (4), New York, N. Y......Apr. 20
May 2. Windmill, New York, N. Y...............Apr. 20
May 2. Electric plant, water-wks, Mayville, N.Dak. Apr. 20
May 2. Electric and gas lighting, Florence, Ala. .. Apr. 20
May 2. Electric plant, Kansas City, Mo...........Apr. 20
May 2. Dredging, Wallabout channel, New York.. Apr. 6
Advertised, Eng. News, Apr. 6 to 27.
May 2. Asylum buildings, etc., Concord, N. H...Apr. 27
May 2. School building, Devil's Lake, N. Dak...Apr. 27
May 2. Gravel road, New Whatcom, Wash........Apr. 27
May 2. Stone church building, Chelsea, Mich....Apr. 27
May 2. Brick chapel, Marion, Ind. ....Apr. 27
May 2. Building plans, Fargo, N. Dak............Apr. 27
May 2. Street work, Marion, Ind.................Apr. 27
May 2. Removing dirt, etc., Lebanon, Pa........Apr. 27
May 2. Bridge work, St. Paul, Minn. ....Apr. 27
May 3. Soldiers' Home buildings, Danville, Ill....Apr. 27
May 3. Combination bridges, Grafton, N. Dak...Apr. 27
May 3. Ice plant, Manila, Philippines............Apr. 27
May 3. Frame trestle b'dge, New Whatcom, Wash. Apr. 27
May 3. Jail building, Fairmont, Minn............Apr. 27
May 3. Bridge on piling, Eugene, Ore............Apr. 27
May 3. Sewers, etc., Laurel, Del................Apr. 27
May 3. Water-works, Laurel, Del. ....Apr. 27
May 3. Dredging, Gowanus Creek, New York.....Apr. 6
Advertised, Eng. News, Apr. 6 to 27.
May 3. Sewerage system, Sauk Centre, Minn....Mar. 30
Advertised, Eng. News, Mar. 30 and Apr. 6.
May 3. Water-works, Winchester, Ind. ....Apr. 20
Advertised, Eng. News, Apr. 20 and 27.
May 3. Repairing asphalt pavement, Cincinnati, O. Apr. 20
May 3. Electric plant, Winchester, Ind. ....Apr. 20
Advertised, Eng. News, Apr. 20 and 27.
May 4. Hospital building, etc., Morris Plains, N.J. Apr. 20
May 4. Asylum building, Whitehall, Wis..........Apr. 20
May 4. Asphalt and brick paving, Ft. Wayne, Ind. Apr. 13
May 4. Shop building, Carson, Nev. ....Apr. 13
May 4. Plumbing, Allegheny, Pa.................Apr. 27
May 4. School building, Monroe, La..............Apr. 27
May 4. Park work, New York ....Apr. 27
May 4. Street grading, Easton, Pa...............Apr. 27
May 4. Macadamizing, 11 roads, Hackensack, N. J. Apr. 27
May 5. Sewers, etc., Buffalo, N. Y..............Apr. 27
May 5. Electric plant, Belgrade, Minn...........Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 5. Hotel building, Moulton, Ia. ....Apr. 27
May 5. Building plans, Halifax, N. S............Apr. 27
May 5. Water-works, Belgrade, Minn. ....Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 5. Brick sewer, Bridgeport, Conn. ....Apr. 13
Advertised, Eng. News, Apr. 13 and 20.
May 6. Levee work, West Memphis, Ark.........Apr. 13
Advertised, Engineering News, Apr. 13.
May 6. Lock and dam, St. Louis, Mo. ....Apr. 13
Advertised, Eng. News, Apr. 13 to May 4.
May 6. Cement, Washington, D. C. ....Apr. 20
Advertised, Engineering News, Apr. 20.
May 6. Street work, Mansfield, O. ....Apr. 20
May 6. Macadam roads, 9 miles, Westshoals, Ind. Apr. 27
May 6. Sewerage system, Charlottetown, P. E. I.. Apr. 27
May 6. Steel roof, etc., Washington, D. C.........Apr. 27
May 6. Raising iron bridge, Washington, D. C...Apr. 27
Advertised, Engineering News, Apr. 27.
May 6. Water-works, Glouster, O...............Apr. 27
May 6. Boilers (6), Chicago, Ill. ....Apr. 27
May 8. School building work, Brooklyn, N. Y...Apr. 27
May 8. Gun forgings, Washington, D. C..........Apr. 27
May 8. Irrigation system, San Carlos, Ariz. ....Apr. 27
May 8. Heating and ventilating, Brockton, Mass.. Apr. 20
Advertised, Eng. News, Apr. 20 and 27.
May 8. School bldg, sewers, etc., San Carlos, Ariz. Apr. 20
May 8. Sewers, Elyria, O. ....Apr. 20
May 8. School building, Pima, Ariz. ....Apr. 13
May 8. Water franchise, Orange, Cal. ....Apr. 13
May 8. Dredging, Peekskill, N. Y. ....Apr. 13
Advertised, Eng. News, Apr. 13 to May 4.
May 9. Feeder canal (13 miles), Tampico, Ill.....Apr. 6
Advertised, Eng. News, Apr. 6 to May 3.
May 9. Bridge complete, Binghamton, N. Y.......Apr. 20
Advertised, Eng. News, Apr. 20 and 27.
May 9. Heating, Hallock, Minn. ....Apr. 20
May 9. Electric plant, Moundsville, W. Va........Apr. 20
May 9. Bridge, Birmingham, O. ....Apr. 20
May 9. Asphalt and brick paving, Marion, Ind...Apr. 27
May 9. Electric plant franchise, Midway, Ky....Apr. 27
May 10. Gravel roads (6), Rockville, Ind..........Apr. 27
May 10. Masonry arch, Cleveland, O.............Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 10. Buildings, San Francisco, Cal. ....Apr. 20
May 10. Sewers, Chicago, Ill............. ....Apr. 20
May 10. Dredging, New London, Conn. ....Apr. 13
Advertised, Eng. News, Apr. 13. to May 4.
May 10. Electric plant, Galt, Ont. ....Apr. 13
May 10. Oil tanks (4), Montreal, Que............Apr. 13
May 10. Concrete superstructure, Buffalo, N.Y.....Apr. 13
Advertised, Eng. News, Apr. 13 to May 4.
May 11. Ice plant, and cold storage, West Point, N.Y. Apr. 13
Advertised, Eng. News, Apr. 13 to May 4.
May 11. Plumbing and drainage, New York ....Apr. 20
May 11. Filter beds, Marlboro Junction, Mass....Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 11. Iron bridges (2), London, O...............Apr. 27
May 11. Asphalt paving, etc., Union, N. J.........Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 12. Explosives, Vicksburg, Miss........... ..Apr. 27
May 12. Masonry dam, White Plains, N. Y......Apr. 27
Advertised, Eng. News, Apr. 27 to May 11.
May 12. Bridges (5), St. Joseph, Mo. ....Apr. 27
May 12. Buildings, Crow Creek, S. Dak...........Apr. 20
May 12. Dredging, Mobile Bay, Ala. ....Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 13. Dipper dredges (2), Chattanooga, Tenn....Apr. 13
Advertised, Eng. News, Apr. 13 to May 4.
May 13. Electric plants (2), St. Helena Isl., N. C...Apr. 13
Advertised, Eng. News, Apr. 13 to May 4.
May 13. Naphtha lamps, Washington, D. C.......Apr. 20
Advertised, Engineering News, Apr. 20.
May 13. Street lanterns, Washington, D. C.........Apr. 20
Advertised, Engineering News, Apr. 20.
May 13. Dock gates, Boston, Mass. ....Apr. 27
May 13. Revetment and filling, Toledo, O.........Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 13. Boiler settings, Yonkers, N. Y. ....Apr. 27
May 15. Macadam paving, Petersburg, Va. ......Apr. 27
Advertised, Engineering News, Apr .27.
May 15. Pipe sewers, Elizabeth, N. J.............Apr. 27
May 15. Paving blocks, etc., Haverhill, Mass......Apr. 27
Advertised, Engineering News, Apr. 27.
May 15. Paving, etc., Elizabeth, N. J.............Apr. 27
May 15. Electric plant, Whitecloud, Mich.........Apr. 27
May 15. Macadamizing, Plainfield, N. J...........Apr. 27
May 15. Water pipe, Wellsville, O. ....Apr. 20
May 15. Steam road roller, Nanaimo, N. B. ....Apr. 20
May 15. Dredging, etc., Sandusky, O. ....Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 15. Dredging, Huntington Harbor, N. Y......Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 15. Electric lighting, Lebanon, Pa. ....Apr. 20
May 15. Steel bridges (4), Honolulu, H. I.........Apr. 20
May 15. Railway, Chili ....Apr. 13
May 15. Sewers, Medford, Ore. ....Mar. 30
May 15. Church building, Hartley, Ia. ....Apr. 20
May 15. Water-works, Gold Hill, Ore..............Apr. 20
May 15. Water-works, Gallatin, Tenn.............Apr. 20
Advertised, Engineering News, Apr. 20.
May 16. Immigrant building, Ellis Island, N.Y.H.. Apr. 20
Advertised, Eng. News, Apr. 20 and 27.
May 16. Water pumps, etc., Ottawa, Ont. ....Apr. 20
Advertised, Eng. News, Apr. 20 to May 4.
May 17. Dead house, Washington, D. C. ....Apr. 20
May 17. Sand, Fisher's Island, N. Y...............Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 17. Dredging, Wisconsin. ....Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 17. Dredging, etc., Portchester, N. Y. ....Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 17. Sewerage system, Auburn, Ill. ....Apr. 20
Advertised, Engineering News, Apr. 20.
May 17. Removing wreck, Boston, Mass. ....Apr. 27
May 17. Excavating reservoir, Clinton, Mass. ....Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 17. Infirmary building, Norristown, Pa. ......Apr. 27
May 17. Boiler plant, Columbus, O. ....Apr. 27
May 18. Sewers, Norristown, Pa. ....Apr. 27
May 18. Electrical machinery, London, England.. Apr. 27
May 18. Heat'g and ventilat'g, Ellis Island, N.Y.H.. Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 18. Pumping machinery, Willimantic, Conn...Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 18. Dredging ship channel, Baltimore, Md.....Apr. 13
Advertised, Eng. News, Apr. 13 to May 4.
May 18. Removing rock, etc., Mystic River, Conn.. Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 18. Dredging, Stamford Harbor, Conn.........Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 19. Pier work, St. Joseph, Mich..............Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 19. Sewers, Cambridge, O. ....Apr. 27
Advertised, Engineering News, Apr. 27.
May 20. Dredging plant, Buffalo, N. Y. ....Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 20. Asphalt paving, Washington, D. C.......Apr. 27
Advertised, Engineering News, Apr. 27.
May 22. Macadamizing, etc., Cincinnati, O........Apr. 27
May 22. Portland cement, Louisville, Ky..........Apr. 27
Advertised, Eng. News, Apr. 27 to May 18.
May 22. Brick paving, Glens Falls, N. Y. ....Apr. 20
Advertised, Eng. News, Apr. 20 to May 11.
May 22. Excavating, Oswego, N. Y...............Apr. 27
Advertised, Eng. News, Apr. 27 to May 18.
May 22. Plumbing, etc., Ellis Island, N. Y. H.....April 27
Advertised, Eng. News, Apr. 27 and May 4.
May 22. Bridge work, Toronto, Ont. ....Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
May 22. Public lighting, Vincennes, Ind. ....Apr. 13
May 25. Sewer system, Johannesburg, S. Africa....Mar. [illegible]
May 25. Dredging, Mississippi ....Apr. 27
Advertised, Eng. News, Apr. 27 to May 18.
May 25. Dredging, Chicago, Ill. ....Apr. 27
Advertised, Eng. News, Apr. 27 to May 18.
May 25. Brick storehouse, North Point, Md. ......Apr. 27
Advertised, Eng. News, Apr. 27 to May 18.
May 25. Harbor work, Wisconsin ....Apr. 27
Advertised, Eng. News, Apr. 27 to May 18.
May 27. U. S. building work, San Francisco, Cal.. Apr. 27
Advertised, Eng. News, Apr. 27 to May 4.
May 27. Water pipe, etc., Washington, D. C.......Apr. 27
Advertised, Engineering News, Apr. 27.
May 31. Dams & shore protection, Rock Island, Ill. Apr. 27
Advertised, Eng. News, Apr. 27 to May 18.
May 31. Armor plate, Washington, D. C. ....Apr. 6
May 31. Plate girder railway bridge, Joliet, Ill...Apr. 13
Advertised, Engineering News, Apr. 13.
May 31. Dredges (2), St. Louis, Mo...............Apr. 20
Advertised, Eng. News, Apr. 20 to May 25.
June 1. Plans for market, Leeds, England........Feb. 16
June 1. Electric plant, Prineville, Ore. ....Apr. 13
June 1. Water and sewer bonds, Prescott, Ont...Apr. 27
June 3. Building, Harrogate, England...........Apr. 13
June 5. Excavating reservoir, Clinton, Mass. ....Apr. 27
Advertised, Eng. News, Apr. 27 and May 4.
June 6. Hospital buildings, Auburn, Cal. ....Apr. 27
June 10. Timber dry-dock, Mare Island, Cal. ......Apr. 13
June 30. Electric r y (23 miles), Shanghai, China. Mar. 2
Advertised, Eng. News, Nov. 17 to Dec. 8.
July 5. Drainage canal, etc., New Orleans, La...Apr. 27
Oct. 1. Electric street railway, Moscow, Russia.. Mar. 9
No date. Railway (50 miles), Michigan.............Apr. 13
Advertised, Engineering News, Apr. 13.
No date. Water pipe, Peekskill, N. Y.............Apr. 20
" . Brick and stone paving, etc., Ithaca, N. Y. Apr. 20
Advertised, Eng. News, Apr. 20 to May 4.
No date. Bridge on piles, Santa Rosa, Cal........Apr. 27

RAILWAYS.

ALLEGHENY & WESTERN.—Reports state that track has been laid on this branch of the Buffalo, Rochester & Pittsburg Ry. from Punxsutawney to the bridge at Good, Pa., and from Butler to a point near Craigsville. The east shore span of the Mosgrove bridge is up, and the other bridge work is also being pushed. It is expected to have the line in operation by July. J. M. Floesch, Ch. Engr., Kittanning, Pa.

ARKANSAS VALLEY & GULF.—This company has been incorporated in Kansas, with $1,000,000 capital stock, to build from Arkansas City, Kan., to Texarkana, Tex. W. B. Lawrence and Geo. H. Whitcomb, Topeka, Kan., and Harry S. Moffit, Boston, Mass., are directors.

BALTIMORE & OHIO SOUTHWESTERN.—Mason & Hogde, Louisville, Ky., are reported to have received the contract for building a tunnel and reducing the number of curves on this line near Willow Grove, Ky., at $95,000. The contract for 16 miles of second track between Cochran and Milan, and for grading at Iuka, Ky., was let to the Globe Construction Co., Cincinnati, O., at a total of $95,000; and the contract for a change of line from Hayden to North Vernon has been let to Schuh & Gannon, Cairo, Ill., at $14,000, and for improvement of Otter Creek, at $30,000. The work is to be completed within six and nine months, and will reduce the grade to 26 ft. a mile. H. Pierce, Engr. Maintenance of Way, Huntington, W. Va.

CALIFORNIA.—P. A. Buell & Co., Stockton, Cal., are reported to have been awarded the contract for part of the material to build about 12 miles of narrow-gage railway from Summerville, Cal., to the timber land owned by the West Side Flume & Lumber Co.

CAROLINA NORTHERN.—Bids are asked until May 1 for grading this road from Lumberton, N. C., to Marion, S. C., twelve miles of which are located, as stated in our advertising columns. J. H. McRee, Ch. Engr., Lumberton, N. C.

CENTRAL NEW YORK & NORTHERN.—This company was incorporated in New York, April 20, with a capital stock of $1,500,000, to construct a steam line from the Central New York & Western R. R. at Perkinsville to the West Shore R. R. at Macedon, Wayne county, N. Y., 55 miles, with a 5-mile branch from the main line at Canadice to the Hemlock Lake branch of the Lehigh Valley R. R. at Hemlock Lake. The directors are: Wm. W. Clark, and Martin Kimmel, Wayland, N. Y.; Frederic H. Mollenhauer, New York, and others.

CENTRAL WEST VIRGINIA.—Incorporated in West Virginia, with a capital stock of $1,000,000, to build a line from Bartlett's Station to the head of Jack's Run, Harrison county, W. Va. Carl H. Hunter and Walter W. Willis, of Clarksburg, W. Va., are incorporators.

CHICAGO, BLUFFTON & CINCINNATI.—Reports state that F. W. Short, W. S. Walker and others have decided to build this projected railway this year between Huntington and Union City, Ind.

CHICAGO, BURLINGTON & QUINCY.—Plans have been completed, according to reports, for the improvements to be made along this line during the coming season. Track elevation in Chicago has already been begun, and is expected to be completed within 60 days. Some heavy grades in Illinois will be reduced and several curves eliminated. About 35 miles of double track will be laid in Iowa, between Mount Pleasant and Batavia, and a new line constructed between Grant City and Albany, Mo. E. J. Blake, Ch. Engr., Chicago, Ill.

COAHUILA & PACIFIC.—Contracts will be let in June, according to reports, for the construction of this proposed standard-gage line from Saltillo to Torreon, Mexico, 310 kilometers (189 miles) in length, under a concession held by A. W. Lilliendahl, Saltillo, Mex. H. T. Lilliendahl, 11 Broadway, New York; T. S. Abbott, New York, is chief engineer.

CHICAGO, MILWAUKEE & ST. PAUL.—It is announced that this company has decided to build extensions this year from Fonda to Dickens, via Marathon and Gilletts Grove, Ia., about 40 miles, and from Rockwell City to Spencer, via Sac City and Storm Lake, Ia. D. J. Whittemore, Ch. Engr., Chicago.

CLEAR FORK AND POCAHONTAS.—Incorporated in West Virginia, April 4, to construct a line from the mouth of Clear Fork Creek, at Gordon station, on the Norfolk & Western Ry., up the valley to the head of Hooper's Creek, with several branches. Chas. E. Ritchie, Akron, O., is an incorporator.

COLORADO.—Press reports state that Eastern capitalists intend to buy the Florence & Cripple Creek R. R. and the Midland Terminal Ry., the former a narrow-gage and the latter a standard-gage line, and to extend and improve the same.

DENVER & WESTERN TERMINAL.—Incorporated in Colorado, April 15, with a capital stock of $50,000, to construct and operate a line from Denver to Pueblo, with a branch from Globeville to Steamboat Springs and Piedmont, Wyo. H. Herman Leckband, D. Washburn and Wm. H. Cressingham are incorporators, with offices at Denver, Colo.

DETROIT & TOLEDO SHORE LINE.—The Erie Construction Co. is stated to have received the contract for constructing this new line between Detroit, Mich., and Toledo, O., about 50 miles. Among the directors are: Thos. E. Young, Cleveland, O., and W. B. Richie, Lima, O.

DULUTH & NEW ORLEANS.—S. V. Wardall, Secy., Nevada, Ia., informs us that this company is ready to receive bids for the construction of this proposed line from Des Moines to Osage, Ia., via Nevada and Iowa Falls, 130 miles. Surveys have been made from Des Moines to Nevada, about 30 miles, and lines are now being carried further north. The capital has been secured and contracts will be let as soon as possible. H. C. Arnold, Pres., Minneapolis, Minn.; B. Schreiner, Ch. Engr., Nevada, Ia.

EASTERN ILLINOIS & MISSOURI.—The contract for building this 60-mile extension of the Chicago & Eastern Illinois R. R. from Marion to East Girardeau, Ill., has been awarded to Creech & Lee, Kansas City, Mo.; work is expected to begin at once. W. S. Dawley, Ch. Engr., 355 Dearborn St., Chicago, Ill.

EASTERN RY. OF MINNESOTA.—This company has increased its capital stock for the purpose of constructing an extension from the present terminus, at Hibbing, Minn., to the Steel & Wire Co.'s iron mines near Virginia, 22 miles. G. T. Slade, Supt., Superior, Wis.

ERIE & FALLS CREEK.—J. P. Byers, Pres., Cooperstown, Pa., informs us that this company has been formed to build a railway between Franklin and Erie, via Cooperstown, Bradleytown and Townville, Pa. Mr. Moody, Ch. Engr., Erie, Pa.

GEORGIA NORTHERN.—This company has recently let the contract for grading 23 miles of roadbed from the northern line of Colquitt county to a junction with the Savannah, Florida & Western Ry., near Albany, Ga. Twelve miles of this extension traverses a heavily timbered section of country and the remaining eleven miles a highly productive agricultural country.

LINVILLE RIVER.—Doby & Perry are reported to have begun track-laying on this new line between Cranberry and Pineola, N. C., 14 miles. A. B. Camp, Gen. Mgr., Montezuma, N. C.

MINNESOTA & MANITOBA.—This company has been incorporated, with a capital stock of $1,000,000, to build about 40 miles of railway near the Lake of the Woods, Minnesota, to serve as a connecting link between lines from Port Arthur to Rainy River and from the Canadian border to Winnipeg. Hector Baxter and Clarence H. Childs, Minneapolis, Minn., are incorporators.

MOBILE & BAY SHORE.—About six miles of track has been laid on this new line, and a bridge is now being built across the Dog River. The road will first be built to Coden and later to Alabama Port, Ala. E. L. Russell, Pres., Mobile, Ala.

NEW YORK, WYOMING & WESTERN.—J. L. Kemmerer, Secy. and Treas., Scranton, Pa., is quoted as stating that the directors of this company have decided to commence active operations immediately towards building the portion of this road between Scranton, Pa., and the Delaware Water Gap, for the independent coal operators in the Wyoming district. Surveys have already been made, and the rails purchased. E. B. Sturges, Pres.; Edwin L. Jenks, Ch. Engr., of Scranton, Pa.

NICARAGUA.—Reports state that the Government is negotiating for the sale of all its railway and steamship lines, with their workshops, to C. E. Nicoll, British Consul at Managua, Nicaragua.

PASADENA & MOUNT LOWE.—This company, which proposes to build from Pasadena, Cal., to the summit of Mount Lowe, has reduced its capital stock from $600,000 to $400,000, according to reports. W. F. Botsford, Los Angeles, Cal., and Valentine Peyton, Danville, Ill., are incorporators.

PITTSBURG, CINCINNATI, CHICAGO & ST. LOUIS.—S. W. McConnell, Engr., Steubenville, O., informs us that the surveys have been completed and most of the right of way obtained for the extension of the Cumberland branch of this road from Kenilworth station to Chester, across the river from East Liverpool, O., 4.7 miles. Bids have been received, but the contract will not be let until the right of way is fully settled. Thos. H. Johnson, Ch. Engr., Pittsburg, Pa.

PUNGO & MATTAMUSKEET.—Reports state that J. M. Rhodes, Scranton, Pa.; S. S. Mann and G. Bran, of Swan Quarter, N. C., are promoting the construction of this line from Makeleyville to Swan Quarter, N. C., about 30 miles.

SOUTH BUFFALO.—Incorporated in New York April 25, with a capital stock of $500,000, to build a standard gage steam railway from a point on the Buffalo Creek R. R., near its intersection with the New York, Lackawanna & Western, to West Seneca, N. Y., near the intersection of the Terminal Ry. of Buffalo and the Lake Shore & Michigan Southern, a distance of about eight miles. John J. Albright, Wm. A. Rogers and F. D. Locke, of Buffalo, are incorporators.

TRENTON, LAWRENCEVILLE & PRINCETON.—We are informed that Vandegrift & Co., 311 Drexel Bldg., Philadelphia, Pa., have been awarded the contract for the construction of this line over a private right of way from Trenton to Princeton, via Lawrenceville, N. J., ten miles. Work has been commenced with about 150 men, and is to be completed within two months. The contractors will furnish all rail and material. There will be four iron bridges on the route.

TUG RIVER & ELK FORK.—Incorporated in West Virginia, April 20, with a capital stock of $30,000, to build from Welch, W. Va., to a point near the north and south fork of Tug River, McDowell county, and thence to Pocahontas, Va. The incorporators are: C. L. Ritter, Welch, W. Va.; E. M. Watts and H. S. Cato, Huntington, W. Va.

ULSTER & DELAWARE.—The New York State Railroad Commission has granted the applications of the Stony Clove & Catskill Mountain and the Kaaterskill branches of this system to change their tracks from a narrow to a standard gage. E. Coykendahl, Gen. Supt., Rondout, N. Y.

WASHINGTON, WESTMINSTER & GETTYSBURG.—Jas. B. Colegrove, Pres., Washington, D. C., informs us that contracts will be let in May for constructing this projected steam line from Washington to Gettysburg, 79 miles. H. E. Lehman, Ch. Engr., 711 Walnut St., Philadelphia.

WEST VIRGINIA.—R. T. Herndon, Pres., Charleston, W. Va., informs us that this company proposes to build a 12-mile extension from Hernshaw to Racine, W. Va., as stated in our last issue. Capital for construction has been secured, but no surveys have yet been made. Surveys will commence on May 1, and contracts let as soon as they are completed.

STREET AND ELECTRIC RAILWAYS.

BRANDON, VT.—It is reported that William Hooper, Philadelphia, Pa., and E. D. Blackwell, Montpelier, Vt., are promoting the construction of the proposed Lake Dunmore, Brandon & Rutland Ry., a total distance of 24½ miles.

HAMPTON, N. H.—Jas. F. Shaw & Co., Boston, Mass., are said to be about to begin the construction of the Hampton branch of the proposed Haverhill, Merrimac & Amesbury St. Ry.

BRAINTREE, MASS.—The Braintree & Weymouth St. Ry. Co. has been reorganized with David Pepper, Jr., as president, and John Kelley, vice-president. It is said that important improvements will be made before summer.

BROCKTON, MASS.—The Brockton St. Ry. Co. has been granted a franchise to build on Centre St., from Commercial to Cary Sts. with a number of turnouts. H. B. Rogers, Mgr.

BLOOMFIELD, CONN.—It is announced that the organization of the Bloomfield, Tariffville & East Granby Tramway Co., which was chartered in 1897, has been completed, and the $100,000 capital stock subscribed for. It is proposed to build from Hartford to Bloomfield, Tariffville, East Granby and North Granby. John A. Crilly, Pres., Hartford, Conn.; H. R. Mills, Secy., Bloomfield.

NORWALK, CONN.—Press reports state that W. F. Sheehan and others, who have recently purchased the lighting interests of Norwalk, have secured control of the Norwalk St. Ry.

BUFFALO, N. Y.—Work was commenced at Hamburg, April 17, on the construction of the Buffalo, Hamburg & Aurora, to be built from East Aurora to Hamburg, via Orchard Park, 21 miles. M. L. Upson, Gen. Mgr., 1095 Ellicott Square.

CLYDE, N. Y.—Preliminary surveys are reported to have been completed for the proposed electric line of the Clyde Gas & Electric Co., from Clyde to Bonniecastle, 12 miles, and maps are now being made. The village trustees of Clyde will be asked for a franchise on May 6. Chas. W. Field, Pres., Clyde; The Osborn Co., Osborn Bldg., Cleveland, O., Ch. Engr.

FAR ROCKAWAY (L. I.), N. Y.—It is reported that P. H. Flynn, Brooklyn, and associates, are asking for bids for the construction of a trolley line across Jamaica Bay to Rockaway Beach. The road will probably start in Liberty Ave., Brooklyn, and proceed directly across Jamaica Bay on a trestle bridge.

MOUNT VERNON, N. Y.—Construction work has been begun on the new branch of the Union Ry. between this city and White Plains. Operation is expected to commence before Sept. 1. E. A. Maher, Pres. and Gen. Mgr., 128th St. and 3d Ave., New York.

NEW YORK, N. Y.—The Municipal St. Ry. Co. has been incorporated, with a capital stock of $250,000, to construct about nine miles of street railway in this city, between 116th St and 8th Ave. and Kingsbridge road and West 230th St., with branches. It is proposed to charge a three-cent fare. Among the directors are said to be Edwin M. Post, Jas. D. W. Cutting and Arthur C. Hume, of New York.

RICHMOND, (S. I.), N. Y.—Reports state that the Staten Island Rapid Transit R. R. was sold at auction, April 20, to H. Bronner, R. H. Minzer and Frank Geary, of New York, for $2,000,000. The line runs from St. George to Arlington and South Beach.

SCHENECTADY, N. Y.—Dewitt C. Smith is reported to have charge of surveys being made between this city and Saratoga for a projected trolley line.

WATERTOWN, N. Y.—Thomas and J. D. Murray, Brooklyn, are reported to have been awarded the contract for building the Black River Traction Co.'s extension from Dexter to Brownsville. S. R. Smith, Mgr.

HARRISBURG, PA.—The Harrisburg Traction Co. has completed plans for the reconstruction of its double track on Market St., and work is expected to begin as soon as materials are obtained. F. B. Mussen, Supt.

LANSDOWNE, PA.—We are informed that the surveys have been made, the right of way obtained, and part of the capital secured for the proposed Arcadia Park Ry. from Lansdowne to Heyville and Clifton, three miles. Contracts will be let early in May. Address Henry M. Brennan, Pres., 131 South 11th St., Philadelphia, Pa.

LEBANON, PA.—We are informed that Lotta & Teny, contractors, Philadelphia, have started the reconstruction of the electric railway lines in Lebanon, and also the construction of an extension to the same on Lehman St. Wm. S. Davis, Ch. Engr., Reading, Pa.

READING, PA.—Davis Bros., Reading, are making surveys for a proposed electric line from Reading to Temple, five miles. Wm. S. Davis, Ch. Engr., of United Traction Co., Reading.—The United Power & Transportation Co. was incorporated in New Jersey, April 20, with a capital stock of $12,500,000, to control the Reading, Lebanon, Chestnut Hill and Roxborough electric railways. John A. Rigg, Pres. of United Traction Co., Reading, is interested.

WILKINSBURG, PA.—Booth & Flinn, Pittsburg, Pa., are reported to have received the contract for constructing the Wilkinsburg & East Pittsburg St. Ry., four miles in length, for the Monongahela St. Ry. Co.; total estimated cost, $150,000. Work will begin at once. Three bridges along the route are now under way; George Hogg, Braddock, Pa., will build the substructure and the Pittsburg Bridge Co., the superstructure. Wilkins & Davidson, Ch. Engrs., 50 9th St., Pittsburg.

DAYTON, O.—Houck & Ely, Dayton, have been awarded the contract for furnishing ties for the proposed line between Dayton and Xenia, which is to be built by the Fairmount Construction Co., of Philadelphia. John M. Carroll, Pres.; J. W. Neff is the chief promoter.

TOLEDO, O.—The Toledo Bridge Co. has received the contract for the iron work on the proposed addition to the power house of the Toledo Traction Co., to cost $30,000. About $60,000 worth of machinery will be installed, including a 1,500-HP. engine, to which will be attached a 1,050-K-W. Westinghouse generator.

INDIANAPOLIS, IND.—The commissioners of Marion county have granted a 50-year franchise to P. [illegible] Fitzgerald, Joseph Elliott and J. C. Tarkington to build an electric railway along the Mooreville Pike, between this city and Martinsville.

BENTON HARBOR, MICH.—The council has granted a new franchise to the Benton Harbor & Eastman Spring Electric St. Ry. Co., work to be completed in 60 days. This line will be operated in connection with the existing system.

KAUKAUNA, WIS.—The Fox River Interurban Electric Ry. Co. petitioned the council of this city, April 18, for a 50-year franchise to build through Kaukauna. W. H. Holcomb, Mgr.

MANKATO, MINN.—The Mankato Electric Car, Light & Power Co. has been organized in this city, with $75,000 capital stock, to construct and operate another street railway and lighting plant. L. S. Lamm, Pres.; O. W. Schmidt, Vice-Pres.

PLATTE CITY, MO.—Willard E. Winner, Kansas City, is reported to have received a franchise to build a line in Platte county.

SEATTLE, WASH.—It is reported that the Seattle & Renton Ry. Co. will this summer extend its line seven miles south from Renton to make a through line between Seattle and Kent. F. H. Osgood, Pres. and Gen. Mgr., is said to be in the East for the purpose of arranging for this extension, as well as to purchase more equipment.

REDLANDS, CAL.—The directors of the Redland St. Ry. Co. will hold a meeting, June 20, to vote upon the question of issuing $50,000 in bonds for the construction and equipment of an electric line in Redlands. J. H. Fisher, Secy.

SAN JOSE, CAL.—A. Greeninger has petitioned the supervisors of Santa Clara county for a franchise to build an electric railway for passengers and freight from San Jose to Alviso. A hearing will be given on May 8.

MEXICO CITY, MEX.—Consul-General Barlow reports that the company owning the street railways in this city is about to substitute electric power for the animal traction heretofore employed. There are about 300 miles of track in the district, which includes the city. One short line of 1½ miles is called the "Banos" (or Baths) line; the rest belongs to the Compania de Ferrocarriles del Distrito Federal. The franchises granted are about the same as in other cities, and the capitalization is $10,000,000. H. P. Bradford, Pres.

LONDON, ENGLAND.—Press reports state that a company has been formed to join Baker St. and Waterloo Road, an underground electric railway. The distance is four miles, and the estimated cost, £2,300,000 ($11,500,000).

ELECTRIC LIGHT AND POWER.

WINOOSKI, VT.—The town has voted to make a contract for electric lights for one year. F. E. Bigwood, Moderator.

WINCHENDON, MASS.—The new power-house for the Winchendon Electric Light & Power Co. will soon be under construction. The building is to be located beside the flume. It will be equipped with a 60-K-W. two-phase generator. The contract for building, it is stated, has not yet been let.

NIANTIC, CONN.—Butts & Crosby, 49 Pearl St., Hartford, Conn., are preparing plans for a compressed air power plant to be located near Niantic, in which the tide forces will be used to drive the air compressors. The machinery required will include structural steel undershot wheels, 30 ft. diameter and 40 ft. face, toothed gears, air compressors, storage tanks, etc. Foundations to be on piles and steel cylinders filled with concrete.

SOUTH NORWALK, CONN.—A syndicate has purchased the property of the Norwalk Gas Light Co., the Norwalk & South Norwalk Electric Light Co., and the Norwalk St. Ry. Co. The tracks and the light plants will be improved and extended. Those interested are: R. A. C. Smith, Pres. American Mail Steamship Co.; H. G. Runkle, of the Warren Foundry & Machine Co., 160 Broadway, New York, and Wm. F. Sheehan, ex-Lieut.-Gov. New York State.

COHOES, N. Y.—Local papers state that a representative from New York of a gas and electric light syndicate, which is about to be formed, is negotiating through J. H. Berns, with a view of purchasing the Cohoes Electric Light Co.'s plant and the Cohoes Gas Light Co.'s plant.

LYONS, N. Y.—The village board has asked for bids for lighting the city by electricity. Applications for franchises have been made by Jacob Straus, W. H. Egan and Geo. Mapes for one company and from Calvin Hotchkiss and Jas. D. Bashford for another company.

ORANGE, N. J.—A. M. Patitz, Arch., 1101 Pabst Bldg., Milwaukee, Wis., is reported to have been engaged by the council to submit a report and estimates for a municipal plant.

GIRARD, PA.—This place will vote May 14 on the question of issuing $20,000 in bonds for a plant and waterworks.

KITTANNING, PA.—The Altoona Construction Co. has received the contract for lighting Kittanning with incandescent arc lights for 10 years, at $65 a light for 40 lights and $60 a light a year for all over 40. A plant is to be in operation by Aug. 1.

NORTH VERSAILLES, PA.—The North Versailles Electric Light Co., which is to furnish power and electric light to towns in the Turtle Creek Valley, has let the contract for a $2,500 brick power house to A. M. Meanor, Turtle Creek. W. E. Ledger, Supt.

PERKASIE, PA.—Plans are being prepared for a plant, according to reports. H. E. Grim may be addressed.

PITTSBURG, PA.—Press reports state that plans for a power plant are being prepared by the Pittsburg & Lake Erie R. R. The plant will generate electricity for lighting and steam for heating the new station on the Southside. Col. J. M. Schoonmaker, Pres., has stated that it had not been positively decided as to the extent of the plant. It will be for the exclusive use of the company, and will probably consist of a large battery of boilers, together with large electric generators. It has not yet been decided whether or not another building, to accommodate the power installation, will have to be erected.

SCRANTON, PA.—Thos. C. Melvin, Councilman from the 8th Ward, writes us that he has introduced an ordinance and has now passed two readings to bond the city for $120,000 for a municipal plant.

WILLIAMSPORT, PA.—Councilman Sladden has introduced an ordinance authorizing a committee to secure plans and specifications for a plant of 300 arc and 1,050 incandescent lights capacity.

WILKES-BARRE, PA.—The committee has recommended the construction of a municipal plant of 600 arc lights capacity, to cost about $80,000. For commercial service a plant to cost $125,000 will be needed.

RICHMOND, VA.—J. Binford, Jr., Secy. Tower-Binford Electrical & Mfg. Co., writes us that the company does not intend to construct a plant at present.

ATLANTA, GA.—A syndicate has purchased the street railway system of this city and has offered to purchase the property of the Georgia Electric Light Co. If it does not purchase the latter a plant will be built. Joel Hust, Pres. Trust Co. of Georgia, and Ernest W. Woodruff, Vice-Pres., are said to be interested.

COLUMBUS, GA.—W. S. Lee, Jr., Res. Engr., Columbus Power Co., writes us that the company is developing a water power here for the generation of 8,000 HP. It is utilizing 40-ft. head. About 40% of the masonry has been completed and the work of installing the wheels and generators will begin early in the fall. W. C. Whitner, Ch. Engr.; H. M. Comer, Pres., Savannah, Ga.

COVINGTON, GA.—It is stated that a plant will be built.

DECATUR, ALA.—Press reports state that the Decatur Light & Power Co. has been reorganized, and the new company has purchased the plant from the General Electric Co., and in the future will operate both the old gas plant and the electric light plant. The two concerns represent an investment of $100,000. Extensive improvements are contemplated. T. H. Harris, former manager of the old company, will probably be the manager for the new company.

FLORENCE, ALA.—We are informed that the Florence Light & Power Co. is ready to receive bids for furnishing water-wheels, electric plant, building dam, etc., for its proposed power plant on Cypress Creek. It is stated that an 8-ft. tunnel 700 ft. long will be built. The plant will cost about $55,000. D. L. Foster, Huntsville, Ala., is interested.

HOLLY SPRINGS, MISS.—This city, it is stated, will vote soon on the question of issuing $18,000 in bonds for a plant and water-works. John Calhoon, Mayor.

OXFORD, MISS.—W. B. Cowan, Mayor, writes us that the city would like to grant a franchise for operating a plant. Population, 2,000.

SEWANEE, TENN.—A company is reported as being formed to build a plant and a cold storage house. Mr. Wiggins and Dr. Hall are interested.

HARRODSBURG, KY.—C. Geffinger, Cy. Clk., writes us that the city is ready to receive bids for constructing a plant with a capacity for 25 2,000-c. p. arc and 25 50-c. p. incandescent lights.

MIDWAY, KY.—Bids are asked until May 9 for the purchase of a 5-year franchise for a plant, according to reports. Matt. Winn, Mayor.

COLUMBUS, O.—It is stated that the county infirmary directors have been considering the question of building a plant.

FORT WAYNE, IND.—Louis Fox, C. S. Bash and Jno. W. White are reported by local papers as interested in a reorganization of the old light company. About $500,000 will be needed to begin work, and of this about $375,000 has already been secured.

BLISSFIELD, MICH.—A. D. Ellis, Pres., writes us that no information can yet be given regarding the proposed plant. A party is talking of building a plant to cost $8,000.

THOMPSONVILLE, MICH.—M. M. Larmouth has leased the city plant for a term of years, and, it is stated, will remove it to the river front.

WEST BAY CITY, MICH.—It is stated that the plant will be moved.

WHITECLOUD, MICH.—Bids are asked until about May 15 for constructing a water power plant to cost $4,500. L. A. Bracy, Clk., writes us that the town owns the water power and will operate machine from wheel now in. The election for permission to raise $4,800 will be held May 3.

JONESBORO, ILL.—This place has voted to build a plant, according to reports.

MECHANICSVILLE, IA.—We are informed that O. J. Davison and O. H. Helmer will want bids before May 1 for constructing the plant to cost $4,000. It will have a capacity of 28 50-c. p. and 350 16-c. p. lights. There will be wanted a 40-HP. engine, a 50-HP. boiler, wiring, etc.

BELGRADE, MINN.—Bids are asked until May 5 for constructing a plant of 250 32-c. p. incandescent lights, and water-works, as stated in our advertising columns. F. W. Lenz, Recdr.

NEBRASKA CITY, NEB.—It is stated that the Nebraska City Water & Light Co. will soon begin the construction of an extension to its properties, at a cost of $15,000. D. P. Rolfe, Mgr.

SOUTH OMAHA, NEB.—Mayor Ensor has signed the ordinance granting a franchise to the Magic City Electric Light Co. It is reported that the Thomson-Houston Co. is behind the Magic City company.

CARTHAGE, MO.—It is reported that G. Jaeger & Co., Rich Hill, Mo., have been awarded the contract at $25,125 for furnishing the materials and for building a plant. Owen Ford, Engr., 710 Security Bldg., St. Louis; C. O. Harrington, Mayor.

FERGUSON, MO.—The King Electric Light & Power Co. will remove its plant inside the city limits, and will also put in new machinery, according to reports.

SILVERTON, COLO.—John Casey writes us that this place voted down on April 4 the proposition to put in a plant.

SACRAMENTO, CAL.—Bids are asked by the city clerk until May 3 for the purchase of a franchise for a plant, the South Yuba Electric Co. having applied.

SAN FRANCISCO, CAL.—Superintendent Hewitt of the Fire Alarm and Police Telegraph has submitted a report on a municipal plant.

SANTA MONICA, CAL.—Contract for constructing a new plant for the Santa Monica Electric & Power Co. at the Ocean Beach has been let to H. X. Goetz, at $6,500.

PARK CITY, UTAH.—R. C. Chambers has received a franchise for a plant, according to reports.

RICHFIELD, UTAH.—It is proposed to build a plant in the Sevies Canyon. It is to furnish lights to Joseph, Monroe, Elsinore and Richfield. J. T. Brecken, Civil Engr.

WINNIPEG, MAN.—At a meeting of the water and light committee, April 17, bids were received for a 300-HP. compound engine, with pumps, condensers and fittings for electric lighting purposes, as follows: Polson Iron Works Co., Toronto, $8,550; Goldie & McCulloch, Galt, $9,350; Robb Engineering Co., Amherstburg, N. S., $7,400. For electrical plant and supplies: Western Electrical Co., Chicago; Canadian General Electric Co., Toronto; Royal Electric Co., Montreal; United Electric Co., Toronto. C. J. Brown, Cy. Clk.

LUCAN, ONT.—The question of building a plant to cost $2,500 will soon be voted upon.

LONDON, ENGLAND.—Bids are asked until May 18 for furnishing and erecting the following plant for the vestry of St. John, Hampstead: Two 500-K-W. steam alternators and engines complete; five Ferranti or similar type switchboard panels; boilers capable of supplying 60,000 lbs. of dry steam per hour; one or two feed-water heaters, capable of heating a maximum of 6,000 gallons of water per hour, with steam and exhaust pipes, etc.; three of Wier's vertical steam feed pumps, with feed pipes, etc.; a 50-K-W. exciter, coupled direct; water-softening plant, capable of softening a minimum of 5,000 gallons of water per hour; an air pump and condenser; a Green's economizer; an overhead traveling crane, suitable for lifting 15 tons; a cast-iron tank, 84 × 28 ft. × 6 ft. 6 ins. A. P. Johnson, Vestry Clk., Vestry Hall, Mampstead, London, N. W.

NEW COMPANIES.—Magic City Electric Light & Power Co., South Omaha, Neb.; $100,000; Wm. J. McManigal, Abraham L. English.

People's Light, Power & Ry. Co., Spartanburg, S. C.; has purchased the gas and electric plants and will make improvements; Jno. B. Cleveland, Pres.; J. C. Norcross.

Bath Water & Power Co., Bath, Pa.; $10,000, with $1,000 paid in; Geo S. Mauser, Moses George, Bath; Calvin F. Smith, Nazareth, Pa.

American Incandescent Light Co., Jersey City, N. J.; $2,000,000; to manufacture and deal in gas and electric lamps; Chas. E. Dickey, Baltimore; Harry A. Norton, Boston; Kenneth McLaren, Jersey City.

San Juan Light & Transit Co., New York; $500,000; to furnish electricity in Porto Rico; to operate gas plants, water-works, telegraph and telephone lines, mines, hotels, ice plants, and to acquire property rights and franchises; Philip H. McMilan, J. J. Kennedy, Russell B. Marchant.

Guernsey Electric Co., Cambridge, O.; $5,000; Wm. C. Benbow, W. P. Devore, S. C. Hayt, H. H. Meeks.

Sag Harbor Electric & Power Co., Sag Harbor, N. Y.; $25,000; Robt. K. Story, C. Z. Southard, S. S. Watson.

Consumers' Electric Light, Heat & Power Co. of Hudson County, 1 Exchange Place, Jersey City, N. J.; $100,000; Rupert Schefbauer, Robert Randolph, E. R. Morris.

Weedsport Electric Light Co., Brutus, N. Y.; $15,000; will extend old plant; John D. Edwards, Weedsport; Harrison L. Hoyt, Wm. G. Thorne, Auburn.

People's Gas & Electric Light Co., Galesburg, Ill.; $100,000; J. T. McKnight, C. O. Craig.

Monongahela Light & Power Co., McKeesport, Pa.; $10,000; has purchased plants in McKeesport, Homestead, Braddock, East Pittsburg, etc.; W. E. Walsh, R. T. Russell, C. F. Farren.

People's Light & Power Co., Wilkes-Barre, Pa.; $5,000, with $500; Jacob Roberts, Jr., Treas.; Saml. J. Tonkin, Wilkes-Barre; R. M. Hughes, West Pittston, Pa.

Cannelton Electric Light, Heat & Power Co., Cannelton, Ind.; $5,000; C. H. Walls, J. C. Adair, Louis Adair, Fordsville, Ky.

Mankato Electric St. Car, Light & Power Co., Mankato, Minn.; $75,000; L. S. Lamm, Pres.; O. W. Schmidt, Vice-Pres.; S. Wilhartz, Secy.; C. J. Macbeth, Treas. It is intended to put in another lighting plant and to build and operate an electric street car line, and perhaps run out to one or two adjacent villages.

Montgomery Water Power & Electrical Co., Montgomery, Ala.; $100,000; J. S. Pinckard, Pres.; J. C. Haas, Vice-Pres.; McD. Cain, Secy. and Treas.

Tower-Binford Electric Mfg. Co., Richmond, Va.; $100,000; P. H. Mayo, Pres.; Geo. A. Tower, Vice-Pres.; Julian Binford, Secy.; Geo. M. Reid, Treas.

American Electric Mfg. & Power Co., Philadelphia, Pa.; $1,000,000; Jno. F. Callahan, Wilmington, Del.

United States, Cuba & Porto Rico Investment Co., Martinsburg, W. Va.; $5,000,000; to build electric plants, water-works, etc.; Chas. J. Faulkner, Martinsburg; Jno. B. Gordon, Atlanta, Ga.; A. H. Hovey, New York; P. H. Perry, Havana, Cuba.

St. Croix Water Power Co., Calais, Me.; $50,000; to build a power plant on the St. Croix River, N. B.; Geo. H. Eaton, Frank Todd, J. G. Murchie.

Tacoma Cataract Co., Tacoma, Wash.; $100,000; to build and operate a power plant; C. H. Baker, Pres. Snoqualmie Falls Power Co.; Jas. C. Drake, Tacoma.

Butte County Electric Power & Lighting Co., San Francisco, Cal.; $500,000; S. C. Denson, W. E. Palmer, T. J. Ryan, San Francisco; O. W. Meysenburg, Chicago; H. W. Snow, Mill Valley, Cal.

Seneca Edison Co., Waterloo, N. Y.; $50,000; S. Dana Green, Schenectady, N. Y.; Norman H. Beckley, Seneca Falls; H. M. Francis, Brooklyn, N. Y.

Crescent Lighting Co., Omaha, Neb.; $100,000; H. A. Searle, J. F. Hurbrick, A. E. Schleider.

American Rys. Co., Philadelphia, Pa.; $25,000,000; to build and operate electric light plants and railways; Pres., A. A. McLeod, Pres. American Air Power Co., New York; Vice-Pres., Wm. H. Shelmerdine, of the Union Traction Co., 421 Chestnut St., Philadelphia; Local Agents, Mathews, Miller & Co., 435 Chestnut St.

South Bethlehem Electric Light Co., South Bethlehem, Pa.; $30,000, with $3,000 paid in; Wm. H. Lauer, Chas. P. Hoffman, South Bethlehem; Uriah H. Wiegand, Emaus, Pa.

BRIDGES.

SCITUATE, MASS.—A bill has been reported to the legislature to authorize the harbor and land commissioners to reconstruct the bridges and roads destroyed by the storm of last November.

HARTFORD, CONN.—Edward D. Graves, Ch. Engr., Connecticut River Bridge and Highway District, informs us that the following bids were received April 15 for furnishing the material and for constructing a steel bridge over a portion of the East Hartford meadows, as advertised in Engineering News:

Berlin Iron Bridge Co., East Berlin (accepted)	$119,917
Boston Bridge Works, Boston, Mass	122,000
J. E. Buddington, New Haven, Conn	124,000
Pittsburg Bridge Co., Pittsburg, Pa	119,000
Dean-Westbrook Bridge Co., New York	142,000
Edge Moor Bridge Works, Wilmington, Del	130,000
Elmira Bridge Co., Elmira, N. Y	138,000
Groton Bridge & Mfg. Co., Groton, N. Y	135,300
Hilton Bridge Construction Co., Albany, N. Y	128,000
King Bridge Co., Cleveland, O	119,900
*F. R. Long & Co., New York	122,000
Massillon Bridge Co., Massillon, O	135,790
**New England Structural Co., Boston, Mass	110,000
New Jersey Steel & Iron Co., Trenton, N. J	118,000
Norcross Bros., Worcester, Mass.*	148,869
M. J. O'Connor & D. J. Curtis, Hartford, Conn.***	178,000
Ryan & Kelly, Philadelphia.***	148,000
Toledo Bridge Co., Toledo, O	138,000
Variety Iron Works, Cleveland, O	136,000
Wrought Iron Bridge Co., Canton, O	135,000
Youngstown Bridge Co., Youngstown, O	123,000

*Stone, $143,000; informal. **Informal. ***Stone.

NORTHAMPTON, MASS.—The city government has voted to petition the legislature to enact the bill to authorize the alteration of the Connecticut River bridge to include rebuilding the floating pier, enlarging the other piers, widening the superstructure four feet, a five-foot sidewalk, and a new floor system.

BAINBRIDGE, N. Y.—Reports state that a contract has been awarded to the Groton Bridge & Mfg. Co. for the sub and superstructure of an iron bridge over the Susquehanna River.

COHOES, N. Y.—The Troy City Ry. Co. and the city officials are considering the question of constructing a new bridge over the Mohawk River on Ontario St. Superintendent Smith proposes to engage Engineer Sweet of the Hilton Bridge Construction, Albany, to prepare plans and estimates.

FLUSHING (L. I.), N. Y.—The highway department will let a contract for a new bridge over the creek at Ireland Mills, as soon as the plans have been approved.

SING SING, N. Y.—Commissioner Dalton has awarded a contract to Frawley & Rooney, of New York, at $17,472, for repairs to the aqueduct arch.

ASBURY PARK, N. J.—The question of constructing a bridge over Sunset Lake will be acted upon at the May meeting of the board of freeholders.

ELIZABETH, N. J.—The board of freeholders has decided to construct a one-span iron girder bridge to cost about $12,000, over the Elizabeth River at West Jersey St. J. L. Bauer, County Engr.

JERSEY CITY, N. J.—An agreement has been made between the Lehigh Valley R. R. Co. and the board of freeholders to construct the Pacific Ave. bridge over the canal at a low grade. W. G. F. Triest, 39 Cortlandt St., New York, was formerly awarded the contract at about $24,000, but has been allowed $6,000 extra on account of the increase in the price of steel.

DOYLESTOWN, PA.—Bids are asked until May 1 for repairing the Hulmeville bridge, according to reports. John T. Poore, Chn. County Comrs.

PITTSBURG, PA.—The contract for the rebuilding of South Main St. bridge has been awarded to Schultz Bridge & Iron Co., McKees Rocks.

READING, PA.—The question of building a bridge across the Schuylkill River at Sixth St. is again being agitated, and it is expected that surveys will shortly be started.

SELLERSVILLE, PA.—The county commissioners are considering the question of constructing a new bridge at this place.

SEWICKLEY, PA.—The borough council has granted permission to the Pittsburg, Fort Wayne & Chicago R. R. Co. to construct a stone bridge over Ferry St.

WASHINGTON, D. C.—Bids are asked by the district commissioners until May 6 for raising the iron highway bridge crossing the Klingle Fort Road on the line of Connecticut Ave. extended, as stated in our advertising columns.

ATLANTA, GA.—A resolution has been passed by the council requiring the Southern R. R. Co. to construct a steel bridge of about 100-ft. span at Whitehall St. crossing, to replace the present wooden structure.

AKRON, O.—The council has adopted a report of the committee which requires the Cleveland, Terminal & Valley R. R. Co. to agree to construct bridges at Worth and Walnut Sts., before permission be granted to raise its tracks.

CINCINNATI, O.—The county commissioners decided, April 19, to again consider the question of issuing bonds for a bridge over the Baltimore & Ohio South Western Ry., at the next meeting of the board.

CLEVELAND, O.—Bids are asked by the board of park commissioners until May 10 for furnishing the material and for constructing a masonry arch under St. Clair St., span, 65 ft.; length, 107 ft.; as stated in our advertising columns. C. W. Pratt, Jr., Ch. Engr., 185 Euclid Ave.

CLEVELAND, O.—The board of control has recommended that the council reject the bids received April 7 for the superstructure of the new Center St. bridge. Plans for a wider roadway and a stronger structure than were originally intended will be drawn at once, and when they are finished new bids will be asked.

EAST LIVERPOOL, O.—John McNally, of Pittsburg, has been awarded a contract for bridges and grade work on the south side extension of the Panhandle R. R.

LONDON, O.—Bids are asked until May 11 for furnishing the material and for constructing the sub and superstructure, etc., of one single pin connected through Pratt truss span, 180 ft. c. to c. and one span low truss bridge, 65 ft. c. to c. W. D. Wilson, County Audr.

INDIANAPOLIS, IND.—Samuel H. Fletcher, Albert W. Coffin, and others, were appointed a committee at a citizens' meeting, April 18, to circulate a petition for the construction of a bridge over White River, at Ray St.

FAIRFIELD, IA.—It is proposed to have the counties of Jefferson, Henry and Washington jointly construct a bridge over Skunk River at Coppock, to cost about $6,000.

ST. PAUL, MINN.—Bids are asked until May 2 for constructing wooden piers and trestle approach, and for removing the old iron spans of the Wabasha St. bridge. Matt Jensen, Cy. Clk.

OMAHA, NEB.—It is reported that it will be several days before plans are completed by the city engineering department, and the engineers of the Union Pacific and the Chicago, Burlington & Quincy R. R. Co., for the proposed new 16th St. viaduct, to cost about $100,000.

ST. JOSEPH, MO.—Bids are asked until May 12 for five new bridges and for repairing one bridge. Theo. Steinacker, County Surv.

GRAFTON, N. DAK.—Bids are asked until May 3 for 12 combination bridges, according to reports. O. M. Fraser, County Audr.

NEW WHATCOM, WASH.—Bids are asked until May 3 for a frame trestle bridge, 160 ft. long and 22 ft. roadway. Alex. Van Wyck, Clk County Comrs.

EUGENE, ORE.—Bids are asked by the county clerk until May 3 for a 60-ft. span bridge on oak piling across Long Tom River.

SANTA ROSA, CAL.—Bids will be received at the first meeting of the board of supervisors in May, for a new bridge, 600 ft. long, on piles, over Green Valley Creek.

CORNWALL, ONT.—A contract has been awarded to the Union Bridge Co., Philadelphia, Pa., for reconstructing the international bridge over the south channel of the St. Lawrence River, which collapsed Sept. 16, and the contract for the foundations has been awarded to the Degnon-MacLean Construction Co., 1 Broadway, New York.

TORONTO, ONT.—Bids are asked until May 22 for furnishing the material and for constructing two steel highway bridges and for taking down and erecting at the Eastern Ave. crossing the present Queen St. bridge, as stated in our advertising columns. John Shaw, Mayor, Chn.

BUILDINGS.

CONCORD, N. H.—Bids are asked by the trustees of the New Hampshire Asylum for the Insane until May 2 for the construction of a new laundry building, a building for women nurses, for building an addition to the boiler house, for furnishing and setting new boiler, for the erection of a new chimney, for new plumbing in the Peaslee and Chandler wings, and for the setting of new waterproof floors in toilet rooms, lavatories, kitchen and bakery. C. P. Bancroft, Supt.

BOSTON, MASS.—A granite annex, 20 x 25 ft., will soon be built for the naval hospital at Chelsea, and also other improvements for which Congress has appropriated $45,000.

SHARON, MASS.—Bids are asked until April 28 for erecting a primary school building at Sharon. Albert E. Crafts, Mem. Bldg. Com.

HARTFORD, CONN.—Plans are about completed for the new 4-story Universalist building to be erected on Main St. Bayley & Goodrich, Archs.——The Cutting & Bardwell Co., Worcester, Mass., is stated to have received the contract for erecting a 6-story warehouse building on Asylum St. for F. W. & F. E. Bartlett.

ALBANY, N. Y.—Bids asked from local contractors only, until May 1, for erecting a free public bath in this city; estimated cost, $21,000. Thos. J. Lanahan, Clk. of Bd. of Contract.

BROOKLYN, N. Y.—Bids are asked by the board of education, at 585 Broadway, New York, until May 8, for erecting an addition to Public School 63, Borough of Brooklyn; for alterations in and erecting an addition to Public School 70, Borough of Brooklyn; also for erecting an addition to Public School 12, Borough of Richmond.

ELLIS ISLAND, N. Y. H.—Bids are asked by the supervising architect, Washington, D. C., until May 18, for heating and ventilating apparatus required for the main buildings at the U. S. Immigration Station, Ellis Island, New York Harbor; also, until May 22, for the plumbing, marble and slate work for the main building; as stated in our advertising columns. Boring & Tilton, Archs., 22 Broadway, New York.

MECHANICSVILLE, N. Y.—M. H. Hubbard, New York, is stated to have been awarded the contract for erecting a new building for the Baptist Church on Park Ave. West, at $20,250.

NEW YORK, N. Y.—Bids are asked by the board of education, at 585 Broadway, until May 1, for alterations, repairs, etc., at Public Schools 8, 21, 23, 41, 48, 56, 57, 71, 77, 88, 106, 108, 112, 144, 122, 124, 125, 126, 136 and 140, Borough of Manhattan; also for alterations, repairs, etc., to Public Schools 22, 26, 28, 31, 32, 38, 49 and 144, Borough of Manhattan; also for grading, paving, etc., at Public School 15, Borough of Richmond.——Plans have been filed by Gottlieb & Cohen, 13 Essex St., for 3-story brick tenement buildings at 87 to 91 Columbus St., to cost $75,000. M. Bernstein, Arch.; by Harry Chaffee, 29 East 19th St., for four 5-story brick flat buildings on Amsterdam Ave., near 138th St., to cost $300,000. Henri Fouchau; by Arthur Gorsch, 1444 3d Ave., for a 4-story brick flat and store building at 120th St. and 8th and St. Nicholas Aves., to cost $75,000. W. C. Tait, Arch., 1238 Madison Ave.; by Mrs. Mary T. Uppington, 770 Greene Ave., Brooklyn, N. Y., for seven 5-story brick flat and store buildings at 159th St. and St. Ann's Ave., to cost $119,000. Charles Rentz, Arch., 153 4th Ave.; by the Riverside Building Co., 2291 Broadway, for four 5-story brick dwellings at Riverside Drive and 79th St., to cost $105,000. Clarence True, Arch.; by Bernard J. Ludwig, 57 East 80th St., for a 5-story brick store building on 14th and 13th Sts., near 5th Ave., to cost $200,000. Louis Korn, Arch., 37 Maiden Lane; by Henry Fischel, 215 East Broadway, for two 6-story brick flat and store buildings at Grand and Suffolk Sts., to cost $85,000. Samuel Sass, Arch.; by the New York Fireproof Tenement House Association, for a 6 and 7-story brick flat and store building at 42d St. and 10th Ave., to cost $75,000. Ernest Flagg, Arch., 35 Wall St.

SYRACUSE, N. Y.—It is reported that W. B. McCallum, Rochester, N. Y., has secured an option on a site in Syracuse upon which he proposes to build a new 4-story theatre building for J. H. Moore; estimated cost, $85,000.

PATERSON, N. J.—The following bids are reported to have been received by the supervising architect, Washington, D. C., April 17, for an electric mail lift at the U. S. building at Paterson: Morse, Williams & Co., Philadelphia, Pa., $2,223; time, 35 days; McAdams & Cartwright Elevator Co., New York, $2,645; time, 30 days; Otis Elevator Co., New York, $2,190; time, 30 days; Eaton & Prince Co., Chicago, $2,300; time, 60 days.

ALLEGHENY, PA.—Bids are asked until May 1 for remodeling the heating plant of the Allegheny high school building. G. W. Gerwig, Secy.——Bids are asked until May 4 for the plumbing work for the new school building being erected in the 3d Ward. Chas. P. Lang, Secy., 413 Grant St., Pittsburg; F. C. Sauer, Arch., Hamilton Bldg., Pittsburg.

DUBOIS, PA.—Bids are asked until April 28 for erecting the Dubois Central school building; deposit, $1,000. U. S. N. Crouse, Secy. of School Bd.; C. M. Robinson, Arch., Altoona, Pa.

HARRISBURG, PA.—The following bids are said to have been received April 15 for the erection of an addition to the Pennsylvania State Lunatic Hospital at Harrisburg: Nesbit & Coder, Harrisburg (accepted), $84,650; N. Reibe, Harrisburg, $86,600; Girard Construction Co., Philadelphia, $87,755; H. C. Hoffman & Son, Philadelphia, $88,752; J. E. & A. L. Pennock, Philadelphia, $88,787; W. G. Ball, Harrisburg, $89,493; C. H. Miller, Harrisburg, $89,719; McIlvain, Unkefer Co., Pittsburg, $89,917; R. C. Ballinger & Co., Philadelphia, $90,593; Chas. McCaul, Philadelphia, $90,966; Ryan & Kelly, Philadelphia, $92,947; Macey, Henderson & Co., Philadelphia, $94,394; J. F. Seibel, Harrisburg, $95,693; John A. Berger & Son, Philadelphia, $96,356; Stacy, Reeves & Son, Philadelphia, $96,997; J. K. Ness, Harrisburg, $97,593; A. Wildman, Harrisburg, $97,867; Wm. Gates, Harrisburg, $99,000; Allen B. Rorke, Philadelphia, $100,000.

NORRISTOWN, PA.—Bids are asked by the commissioners of Montgomery county until May 17 for the erection of an infirmary building at the county almshouse. D. H. Hitner, Clk.; Thos. P. Lonsdale, Arch., 4th and Walnut Sts., Philadelphia.

PHILADELPHIA, PA.—Bids are being received, according to reports, for the erection of a new 2-story building, 96 x 148 ft., for the First Baptist Church at 17th St., near Walnut St.——Bids are being received by W. Steele & Son for a 2-story addition to the 4-story mill of Drueding & Bro., at Lawrence and Master Sts.——Bids will soon be asked for erecting the new Hebrew Union House at 422 to 428 Bainbridge St. Baker & Dallett, Archs.

SOMERSET, PA.—Bids are asked by the directors of the poor and of the house of employment of Somerset county until May 1 for the erection of a 2-story brick hospital building on the farm at the County Home. L. C. Colborn, Somerset.

SPRING GARDEN, PA.—Bids are asked by the Spring Garden school district until May 1 for erecting a school building in Spring Garden township. H. S. Paules, Treas., 610 Plank Road; Chas. A. Keyworth, Arch., 23 East Market St., York.

WASHINGTON, D. C.—Bids are asked by the bureau of yards and docks until May 6 for removing the old roof and building a new steel roof for copper rolling mill, navy yard. Mordecai T. Endicott, Ch. of Bureau.

NORTH POINT, MD.—Bids are asked until May 25 for building a brick storehouse at North Point, as stated in our advertising columns. Col. Peter C. Hains, U. S. Engr., 812 St. Paul St., Baltimore, Md.

NEWPORT NEWS, VA.—Bids are asked until April 27 for erecting a new building for the First Presbyterian Church. Howard L. Edmunds, Secy.; Chas. W. Bolton & Co., Archs., 1007 Witherspoon Bldg., Philadelphia, Pa.

STATESVILLE, N. C.—Plans have been selected for the new court house to be erected here for Iredell county. Hayden, Wheeler & Schwend, Archs.

ATLANTA, GA.—This city has decided to erect a new library building, a conditional gift of $100,000 having been made by Andrew Carnegie towards the erection of the same. W. M. Kelley is interested.

MONROE, LA.—Bids are asked until May 4 for erecting a new high school building in this city. A. A. Forsythe, Mayor.

GEORGETOWN, KY.—George Glass, Georgetown, is reported to have received the contract for erecting the new city building, at $10,140.

CINCINNATI, O.—Plans and specifications will soon be asked by the directors of the German Deaconess Home and Hospital for a new hospital building to be erected at Straight St. and Clifton Ave., at a cost of about $40,000. H. W. Tuechter, Supt.

CLEVELAND, O.—Plans have been prepared by C. F. Schweinfurth for a new Gothic cathedral for the Trinity Episcopal Church, to be erected at Euclid Ave. and Perry St.——Work will soon be begun on the enlargement of the Stillman hotel building, after plans by Knox & Elliott.

COLUMBUS, O.—Bids are asked until May 17 for constructing a new boiler plant for the State Capitol building. Asa S. Bushnell, Chn. State Bldg. Com.; S. Hannaford & Sons, Archs., Cincinnati, O.

WOOSTER, O.—The commissioners of Wayne county have decided to build a new county jail, the old structure having been condemned; estimated cost, $20,000.

BEDFORD, IND.—Harry C. Sense, Lafayette, Ind., has been awarded the contract for erecting a new stone school building for this city, on modified plans, at $15,775. Other bidders were: David Newkirk, Bedford; Dunlap & Coates, Columbus, Ind.; W. E. Thompson and J. D. Babcock, Anderson, Ind.

MARION, IND.—Bids are asked by the National Military Home, Grant county, until May 2, for erecting a brick chapel. H. O. Heichert, Treas.

CHELSEA, MICH.—Bids are asked until May 2 for erecting a stone church building for the Methodist Episcopal Church. O. T. Hoover, Secy. Bldg. Com.

IRONWOOD, MICH.—Bids are asked until May 1 for the heating and ventilating of the high school building. A. D. Garner, School Director; Charlton, Gilbert & Demar, Archs., Milwaukee, Wis.

CHICAGO, ILL.—Martin A. Ryerson will construct a 2-story store and office building at Michigan Boulevard and 14th St., at a cost of $40,000. Holabird & Roche, Archs.——The Western Methodist Book Concern has filed plans for a new 11-story office building at 57 Washington St., to cost $190,000.

DANVILLE, ILL.—Bids are asked by the National Home for Disabled Volunteer Soldiers, Hartford, Conn., until April 29, for erecting three buildings for residences for the governor, surgeon and treasurer at the Danville branch; also for the heating and ventilating apparatus, plumbing, gas piping, electric lighting, etc., in barrack buildings; and until May 3 for erecting a commissary and quartermaster building; also for erecting one building for barrack No. 16, all at the Danville branch. W. C. Gunnell, Engr., Danville.

OSHKOSH, WIS.—The plans of the Kenton Bridge & Iron Co., Canton, O., for a jail and sheriff's residence, to cost $25,000, were accepted, April 18, by the county board.

MOULTON, IA.—Bids are asked until about May 5, according to reports for erecting a 2-story hotel and store building, 100 x 100 ft., for Elmer, Wood & Co. Ernest Koch, Arch., Ottumwa, Ia.

FAIRMONT, MINN.—Bids are asked until May 3 for erecting a jail for Martin county from plans prepared by the Parish Jail Building Co., St. Louis, Mo.

MADISON, MINN.—John Swanson, Minneapolis, Minn., is reported to have been awarded the contract for erecting the new court house for Lacqui Parle county, April 18, at $29,796. The Pond & Hasey Co., Minneapolis, received the contract for heating, at $2,573. Buechner & Jacobsen, Archs., Manhattan Bldg., St. Paul, Minn.

DEVILS LAKE, N. DAK.—Bids are asked until May 2 for erecting a 3-story brick addition to the School for the Deaf. L. A. Larson, Secy.; Hancock Bros., Archs., Fargo.

FARGO, N. DAK.—Plans and specifications are asked until May 2 for a masonic temple building for the Scottish Rite. R. E. Fleming, Pres.

RED LODGE, MONT.—Leck & Coy, Anaconda, Mont., have received the contract to build the new brick court house for Carbon county, at $8,927.

YATES CENTER, KAN.—J. H. Brewister, Independence, Kan., has been awarded the contract for erecting a court house and jail for Woodson county, at $23,147, the work to be completed by Jan. 1.

CENTRAL CITY, COLO.—The commissioners of Gilpin county have decided to erect a new court house in this city at once, to cost about $25,000.

WALLA WALLA, WASH.—Bids are asked by the trustees of Whitman College until May 1, for two 3-story stone and brick buildings, 170 x 70 ft. and 120 x 50 ft., respectively. Address Dr. N. G. Blalock, Walla Walla.

AUBURN, CAL.—Bids are asked by the supervisors of Placer county, until June 6, for constructing the first six sections of the proposed county hospital buildings. J. B. Landis, Clk.

SAN FRANCISCO, CAL.—The following bids have been received by the supervisors of San Francisco county for the construction of the new Mission Police Station: David T. Pierde, $33,850; Lennox & McCann, $34,350; Williams Brothers, $34,450; James S. Fennell, $34,770; Thomas Butler, $34,875; and McCann Bros., $35,000. The bids for the plumbing were as follows: John J. McGowan, $3,000; Allen & Luning, $3,675; McCann Bros., $4,100; J. G. Welch, $4,230; W. L. Luke & Sons, $4,386; Joseph McCaskey, $4,643.——The following bids were received by the supervising architect, Washington, D. C., April 17, for the superstructure, roof covering, fireproofing, etc., of the U. S. building at San Francisco; (a) granite; (b) marble: City Street Improvement Co., San Francisco, (a) $934,649; (b) $1,288,790; 20 mos.; Norcross Bros., Worcester, Mass., (a) $1,128,000; $1,160,000; John Pierce, New York, (a) $889,000, Texas Red and Rocklin; (a) $890,000, Stony Creek Red, Fox Island Gray; (a) $919,000, Texas Red and Raymond Gray; Wm. H. Ellis, Cincinnati, O., (a) $670,500, Smoke River; (a) $684,500, Rocklin; (b) $775,000; 29 mos.; Richardson & Gale, San Francisco, (a) $890,000; (b) $1,075,000; 20 mos.; T. E. Knowles, Oakland, Cal., (a) $830,680, 20 mos.; (b) $1,020,000, 3 yrs.; Geddes & Seerie Stone Co., Denver, Colo., (a) $842,000; (b) $890,000; 27 mos.; Cal. Bridge & Con. Co., Oakland, Cal., (a) $916,504; (b) $948,814, 20 mos.; Cal. Con. Co., San Francisco, (a) $818,811; (b) $868,811, 20 mos.; Bentley Const. Co., Portland, Ore., (a) $859,525, Raymond Gray; Rocklin Gray, (a) $864,525; Snake River Gray, (a) $884,525; 20 mos.

SAN FRANCISCO, CAL.—Bids are asked until May 27 for all the masonry work, roof covering, etc., for the U. S. building in this city, as stated in our advertising columns. James Knox Taylor, Supervising Arch., Washington, D. C.

HALIFAX, N. S.—Plans are asked until May 5 for a building for the Halifax Infants' Home at Inglis St. and Tower Road. Address J. C. Mackintosh, Hollis St.

WATER-WORKS.

PARIS HILL, ME.—The Paris Hill Water Co. has been organized. Geo. M. Atwood, Pres.; Henry D. Hammond, Clk. It is proposed to construct gravity works to cost $5,000.

BOSTON, MASS.—Bids are asked until May 11 for constructing filter-beds near Marlboro Junction, and until May 17 for excavating soil from part of section 5 of the Wachusett Reservoir, etc., at Clinton, as described in our advertising columns. Contracts will be let about June 5 for excavating soil from the above reservoir, besides other work for the Metropolitan Water Board. F. P. Stearns, Ch. Engr.; W. N. Davenport, Secy.

EAST HAMPTON, MASS.—The water commissioners, it is stated, will begin the extension of the mains next month. About 3,000 ft. will be laid.

NORTH ANDOVER, MASS.—A. A. Currier, Chn. Com., writes us that it is proposed to purchase and lay four miles of 6 and 8-in. cast-iron water pipe, and set 30 hydrants, eight 8-in. gate valves, 18 6-in. gates. Erastus Worthington, Engr., Dedham, Mass.

WEST MEDWAY, MASS.—A town meeting will soon be held to vote on the question of building works to cost about $75,000.

NORWICH, CONN.—This city has applied for authority to issue $300,000 in bonds for new works. The new supply will be secured from Stony Brook.

WILLIMANTIC, CONN.—Bids are asked until May 8 for furnishing power pumping machines for the works, as stated in our advertising columns. W. D. Grant, Chn.

AUBURN, N. Y.—The water board has decided to lay 3½ miles of pipe this season, according to reports.

CAPE VINCENT, N. Y.—This place has voted to put in a new boiler and pump for the water-works to cost $3,000.

DEXTER, N. Y.—A. R. Shannon, Watertown, N. Y., has made surveys and estimates for works to cost about $15,000, according to reports.

NYACK, N. Y.—G. N. Houston, Engr. and Supt., writes us that an election will be held May 1 to vote on the question of issuing $35,000 in bonds for completing the works.

SYRACUSE, N. Y.—The water department will probably lay about eight miles of new water mains this season.

WHITE PLAINS, N. Y.—Bids are asked until May 12 for constructing a masonry dam, etc., for the water-works, as stated in our advertising columns. Jno. M. Digney, Pres. Bd. Water Comrs.; J. P. Moran, Secy.

YONKERS, N. Y.—Bids are asked until May 13 for rebuilding boiler settings, etc., at the low service pumping station. J. C. Shotts, Pres. Water Comrs.

SUMMIT, N. J.—The Essex-Union Water & Light Co. has been incorporated with a capital of $500,000, by Carroll P. Bassett, Civil Engr., and Frederick Green, Summit, and Frederick R. Drake, Easton, Pa.

BATH, PA.—The Bath Water & Power Co. will soon begin the construction of works, according to reports. The company was recently incorporated with a capital stock of $10,000, by Geo. S. Mauser, Moses George and Thos. D. Danner.

ELDRED, PA.—It is reported that this place has made a contract for works.

GIRARD, PA.—This place will vote May 14 on the question of issuing $20,000 in bonds for works and an electric plant.

McKEES ROCKS, PA.—It is proposed to issue $150,000 in bonds for municipal works.

LAUREL, DEL.—Bids are asked until May 3 for furnishing 235 tons of 4, 6 and 8-in. cast-iron water pipe, 5½ tons special castings, a 75-ft. steel water tower, and 65,000-gallon tank, gasoline engine and pump, 39 hydrants, 27 valves, etc.; estimated cost, with sewerage, $20,000; C. S. York, Engr, 1526 East Biddle St., Baltimore, Md.; J. W. Wootten, Pres. Town Council.

BALTIMORE, MD.—We are informed that the R. P. Smith Mfg. Co, Newark, N. J., submitted the only bid at $5,250, April 19, for furnishing a pipe tapping machine adapted for taps of 48 ins. diameter.

WASHINGTON, D. C.—Bids are asked by the district commissioners until May 27 for furnishing water valves, iron intakes, etc., as stated in our advertising columns.

TAKOMA PARK, D. C.—Efforts are again being made to secure works. The committee consists of Mayor Shedd, Councilmen Platt, Dyar and Lung.

RICHMOND, VA.—Bids are asked until 12 m., April 27, for furnishing stop-cocks, gate valves, hydrants, castings, etc. C. E. Bolling, Supt. Water-Works.

DAWSON, GA.—The question of building new works is being considered.

MONTGOMERY, ALA.—We are informed that only one bid was received April 10 for four boilers for the works, and that bid was withdrawn without opening. The trouble is thought to have been caused by the specifications requiring two boilers to be in by June and scarcity of boiler plate and in ability to get it in time. Geo. R. Ellis, Consult. Engr., writes us that the following bids were received April 15 for furnishing a 5,000,000-gallon, horizontal compound, duplex, condensing pumping engine: The D. A. Tompkins Co., Charlotte, N. C., $12,440; The Deane Steam Pump Co., Holyoke, Mass., $19,900; Henry R. Worthington, Brooklyn, N. Y., $20,500.

TULLAHOMA, TENN.—W. H. McLennel, Cy. Clk., writes us that the question of building works will have to be submitted to a vote of the people, so no contracts can be let for some time.

LEXINGTON, KY.—The mayor has been authorized to appoint a committee to investigate further the question of building municipal works or of purchasing the present works, which cost about $500,000.

GLOUSTER, O.—Bids are asked until May 6 for furnishing the materials and for constructing the works. There will be wanted 21,000 ft. of 3, 6 and 8-in. pipe, etc. D. Antle, Village Clk.

LISBON, O.—This place is stated to have voted against issuing $20,000 in bonds for works.

HOUGHTON, MICH.—This place has been authorized to issue $60,000 in bonds for works, according to reports.

WEST BAY CITY, MICH.—Local papers state that the commission will soon begin the construction of the proposed new works, to cost about $140,000. Mayor Lind, M. S. Griffin and Jno. Walsh are on the commission.

ALTON, ILL.—Geo. T. Davis writes us that this city, on April 18, voted a majority of 1,370 in favor of municipal works.

CHICAGO, ILL.—Bids are asked until May 6 for furnishing the materials and for constructing six horizontal return tubular boilers, fitted with automatic stokers, with coal conveying machinery, etc., for the Chicago Ave. pumping station. L. E. McGann, Com. Pub. Wks.

MOUNT STERLING, ILL.—The question of building works, to cost about $7,000, is being considered. J. L. Gray and J. D. Milstead are interested.

DES MOINES, IA.—The Des Moines Water Co. will soon spend about $15,000 for improving the works.

THOMPSON, IA.—This place, it is stated, has voted to build works to cost $3,500.

UTE, IA.—Bids are asked until May 1 for constructing works, as stated in our advertising columns. O. E. Lathrop, Clk.

BELGRADE, MINN.—Bids are asked until May 5 for constructing works and an electric plant, as stated in our advertising columns. F. W. Lenz, Recdr.

MOUNTAIN LAKE, MINN.—Mayor Klein, it is stated, is considering bids for building works.

STARBUCK, MINN.—It is stated that the council has decided to build works.

DEADWOOD, S. DAK.—This place voted April 18 to issue $50,000 in bonds for new works. Sol Star, Mayor, writes us that nothing definite will be done for some time. F. C. Tucker, Cy. Engr.

HOWARD, S. DAK.—This place is reported to have decided to build works.

SPEARFISH, S. DAK.—This place has voted to issue $10,000 in bonds for works.

CHINOOK, MONT.—W. C. Kister, Editor "Opinion," writes us that a company has been organized with capital stock of $3,100 to build works. The water supply to be secured from wells. L. V. Bogg, A. S. Lohman and J. W. Clark are interested.

KANSAS CITY, MO.—The Schwarzschild & Sulzberger Packing Co. will begin soon work on a filtering and purifying water-works as an addition to the packing establishment in Armourdale. The works will cost about $60,000, and Mr. Levy, superintendent of construction, says it will have a capacity of ½ million gallons a day. The works will be so built, it is stated, that it can be made to produce a million gallons of water a day if required.

ST. CHARLES, MO.—H. C. Sandfort, Cy. Clk., writes us that the proposition to award the St. Charles Water & Improvement Co. a new 20-year contract was rejected at a special election April 15. A new proposition will probably be submitted in the near future.

SEQUIN, TEX.—The Yorks Creek Artesian Development Co. has been organized by Prof. Martin Ruppel and W. Guesson.

SEATTLE, WASH.—The following are the total bids received April 12, for constructing the Cedar River waterworks addition, as advertised in Engineering News: Subdivision 1, including the pipe lines from Cedar River to Swan Lake and from the lake to the city, complete, as well as the headworks at the intake, etc.; Moran Bros. Co., $1,016,721; Smyth, Wakefield & David, $970,096; Pacific Bridge Co., (not extended); F. McLellan, $921,681. Subdivision 2, including two reservoirs in the city, and one at the City Park and the other in the Nagle addition, east of Broadway and north of Madison Ave.: Moran Bros. Co., $230,840; Smyth, Wakefield & David, $200,134; Pacific Bridge Co. (not extended); F. McLellan, $252,705; Cawsey, Carney & McWilliams, $247,842; Stirratt & Goetz (not extended). Subdivision 3, including the stand pipe on Queen Anne Hill and the mains connecting it with the reservoirs and the distributing system on Renton Hill: Moran Bros. Co., $55,555; Smyth, Wakefield & David, $49,481; Pacific Bridge Co. (not extended). Subdivision 4, including the connection of the Nagle addition reservoir with the general distributing system, with a 30-in. pipe to the corner of Sixth Ave. and Pine St.: Moran Bros. Co., $30,949; Smyth, Wakefield & David, $27,014; Pacific Bridge Co., $35,900. Several injunctions have been served on the city by other bidders, and by a citizen, who assert that the lowest bidders did not submit checks for 5% of the amount of bids, and that the plans if carried out will not furnish the amount and quality of water called for by the city ordinance. It is, therefore, uncertain when the contract will be let.

TACOMA, WASH.—Johnson Nickeus, Mayor, writes us that the matter of improving the water supply is before the council committee. No recommendations have yet been made. N. L. Taylor, City Engr., writes us that the commissioner of public works has been authorized to call for bids immediately for the construction of a 30-in. stave pipe, 2,000 ft. long, to be laid in the city; the above work being done at this time as a partial means of holding the water claim of the city on the South Fork of the Puyallup River, 25 miles distant. Preliminary surveys for a water supply from the above source are practically completed and a pipe line will be located during the summer; providing that the incoming council concurs in the plans approved by the present committee.

LAKEPORT, CAL.—H. V. Keeling, Town Clk., writes us that the following bids were received April 17 for constructing works: James Stanley, 518 15th St., Oakland, Cal., No. 1, $15,444; No. 2, $15,591; Dundon Bridge & Construction Co., San Francisco, Cal., $18,627; C. D. Vincent, San Francisco, Cal., No. 1, $15,430; No. 2, $15,085; No. 3, $14,920.

PASADENA, CAL.—J. D. Allen, Engr., Pasadena Lake Vineyard Land & Water Co., writes us that the company is sinking a well in the Arroyo Leco below Devil's Gate in the hope of intercepting water believed to be passing under the tunnel system owned by the company. As the well will be but 40 or 50 ft. deep and only a small amount of water is expected, no order for a pumping plant will be given until something more definite is known of the quantity of the water to be pumped.

WATERLOO, ONT.—This city voted April 7 in favor of purchasing the works for $40,000.

VISALIA, CAL.—The works at this place have been sold to a new company, who, it is stated, will make a number of improvements. Jno. D. Pope, J. R. Pendergrass and Walter J. Cooper are interested.

IRRIGATION.

SAN CARLOS, ARIZ.—Bids are asked until May 8 for an irrigation system at San Carlos Agency, according to reports. W. A. Jones, Comr. of Indian Affairs, Washington, D. C.

ONTARIO, CAL.—The Ontario Water Co. has been incorporated with a capital stock of $100,000, by A. J. Wallace, Los Angeles; M. V. McQuigg, H. H. Morgan, W. S. Palmer, H. W. Healy, Ontario, and others. Mr. McQuigg, Pres., writes us that it is proposed to install a pumping plant that will pump about 100 ins. of water 75 to 100 ft.

NEW COMPANIES.—Bellevue Irrigation Co., Anderson, Cal.; $10,000; James F. Bedford, H. M. Alexander, Henry Abbott, of Anderson.

Hynes Irrigation Co., Hynes, Cal.; $10,000; J. A. McKelvey, Ed. German, J. D. Fredericks, of Hynes, and 14 others.

San Dimas Well Co., San Dimas, Cal.; $18,000; to acquire water rights in San Jose ranch; F. M. Spelman, Dayton, Ky.; J. W. Walker, E. H. Potts, San Dimas.

Eastern Oregon Land & Irrigation Co., Vale, Ore.; to build reservoirs at Spring Cove and Cow Valley on Willow Creek to reclaim 10,000 acres of land above Vale; also to supply Huntington with water by a system of storage reservoirs.

SEWERAGE.

LAWRENCE, MASS.—The aldermen have voted to complete the Shanty Pond sewer and to engage a superintendent to have charge of the construction.

WAKEFIELD, MASS.—The town has appropriated $300 for further investigation into the sewerage plan proposed for the town. The filter system has been practically decided upon, and the committee is now at work on plans for connecting the different sections of the town, and will decide on the location for the filter beds.

BRIDGEPORT, CONN.—Bids are asked until May 5 for constructing about 3,600 ft. of 30 × 45, 40 and 30-in. brick sewers in three streets. H. G. Scofield, Cy. Engr.; Bernard Keating, Clk.

DERBY, CONN.—J. W. Larkin, Cy. Clk., writes us that bids will probably be wanted about May 1 for constructing certain sewers.

SOUTH MANCHESTER, CONN.—Jno. S. Cheney, Frank S. Cheney, Jr., and C. S. Cheney are reported as considering the question of building a system.

ALBANY, N. Y.—Bids are asked until May 1 for constructing sewers and brick pavements in Harvard and William Sts. T. J. Lanahan, Clk. Bd. of Contract.

BUFFALO, N. Y.—Bids are asked until May 5 for constructing 18 to 10-in. pipe sewers in two streets and for paving in Mackinaw St. R. G. Parsons, Secy. Bd. Pub. Wks.

ROCHESTER, N. Y.—Assistant City Engineer Raymond is making a survey of the territory at the outlet of the East Side sewer for improving the sewage disposal methods of the territory drained by the trunk sewer.

WATERTOWN, N. Y.—The board of public works has served notice upon the council of the need of a trunk sewer to cost $103,090. City Engineer McComb and Commissioners Clare and D. W. Haven may be addressed.

BAYONNE, N. J.—Timothy Burke has been awarded the contract for building a trunk sewer through the Centreville section at $51,788. The following are the other bidders; Jas. Forquer, $63,755; Martin Murray, $65,676; M. T. Connolly, $65,709; Jas. J. Cogan, $67,653; Patrick Costello, $49,394.

ELIZABETH, N. J.—Bids are asked until May 15 for constructing about 1,600 ft. of 12 and 6-in. pipe sewers, 14 manholes, etc. N. K. Thompson, St. Comr.

LOCH ARBOUR, N. J.—The Loch Arbour Sewerage Co. has been incorporated with a capital stock of $10,000 by Jos. J. Keen, Jr., H. Bayard Hodge and G. W. Reynolds, of 119 Market St., Camden, N. J, and Philadelphia, Pa.

BRADDOCK, PA.—Bids are asked until May 1 for 1,800 ft. of 30-in., 1,100 ft. of 24-in. and 265 ft. of 20-in. pipe sewer. S. A. Taylor, Borough Engr., 339 Fifth Ave., Pittsburg.

LEBANON, PA.—It is proposed to have plans for a system prepared at once. Councilman Lineweaver may be addressed.

NORRISTOWN, PA.—Bids are asked until May 18 for constructing sewers in two streets; bonds of $1,000 and $1,500 required. S. C. Corson, Borough Engr.; Jno. Shanks, Chn. Com.

LAUREL, DEL.—Bids are asked until May 3 for furnishing the materials, and for constructing the system, which, with the water-works, will cost about $20,000. There will be about 8,550 ft. of 15 to 6-in. pipe sewers, 8 manholes, etc. C. S. York, Engr., 1526 East Biddle St., Baltimore, Md.; J. W. Wootten, Pres. Council.

PARKERSBURG, W. VA.—City Engineer Jackson is preparing plans for sewers and paving in a number of streets.

VALDOSTA, GA.—Maxey Ashley, Cy. Clk., writes us that an election will be held May 20 to vote on the question of issuing $35,000 in bonds for a system. Population, 4,500.

WEST PALMBEACH, FLA.—O. W. Weybrecht is preparing plans for a system, according to reports.

NEW ORLEANS, LA.—Our correspondent writes us that the sewerage election is now in a fair way. The necessary signatures to the petition asking for such an election have been obtained, and already the Mayor has issued a proclamation calling the attention of property-holders to the fact that they must register at once, as the election will probably be called for the first week in June. The count of the signatures is now progressing, and the city authorities claim to have more names than the law requires (something over 9,000 names). If this proves true, the result of the election can safely be predicted as favorable.

CHATTANOOGA, TENN.—City Engineer Hooke has completed surveys for the Washington St. sewer to cost $8,000.

LEXINGTON, KY.—Jno. U. Upington writes us that it is proposed to build two miles of 6 × 4 ft. brick sewer.

BELLEFONTAINE, O.—Robt. Lamb, Chn., writes us that this place has voted against building a system. The question will likely be voted upon again in the fall.

CAMBRIDGE, O.—Bids are asked until May 19 for furnishing the material and for constructing the extensions of the sanitary and storm systems of sewerage, as described in our advertising columns. O. M. Hoge, Cy. Engr.; T. R. Deselm, Clk.

TOLEDO, O.—Bids are asked by the city clerk until May 1 for constructing 24 and 15-in. pipe sewers in two streets.

WELLSVILLE, O.—Hugh Anderson, Water Trustee, writes us that this city will build a system this summer at a cost of $75,000. D. A. Davidson, Cy. Clk.

EAST ST. LOUIS, ILL.—The legislature has passed a bill authorizing this city to build a trunk sewer with outlet into the Mississippi River; estimated cost, $150,000. Mayor Stephens may be addressed.

EAST ST. LOUIS, ILL.—Bids are asked until 12 o'clock, noon, April 28, for constructing about 20,000 ft. of 30 to 6-in. pipe sewers, 7,400 ft. of stone curbing, 29,750 sq. yds. of brick paving, 85,000 brick in manholes, etc. M. M. Stephens, Mayor.

ALBIA, IA.—The question of building a system is being considered, according to reports.

SIOUX CITY, IA.—Street Commissioner Lynch is urging the construction of new storm sewers.

OMAHA, NEB.—Andrew Rosewater, Cy. Engr., has prepared plans for 4,500 ft. of 8 × 10 ft. brick sewer in 33d St., and 2,500 ft. of 8 × 6¾ ft. brick sewer in Pinkney St.; estimated cost, $60,000.

ANACONDA, MONT.—The county commissioners have asked Mayor Harrison for authority to connect Centreville with the system of this city.

INDEPENDENCE, MO.—The following bids were received April 14 for constructing about 37,000 ft. of 18 to 8-in. pipe sewers: M. S. Jackson, Cedar Rapids, Ia., $20,639; Colyer Bros., $24,777; Matt & Roberts, Jefferson City, $19,521; Laird & Black, Des Moines, Ia., $17,699; Nevins & Johnson, Kansas City, $15,282 (accepted); J. G. Glennon, Kansas City, $22,743; Katz & Crandall, Omaha, $19,334. H. H. Pendleton, Cy. Engr.

GUTHRIE, OKLA.—Mayor Birkey writes us that the question of issuing bonds for a system failed to carry at the late election.

NEVADA, CITY, CAL.—W. F. Engelbright, Engr., writes us that an election will be held May 6 to vote on the question of issuing $28,000 of 6% bonds for completing the system. J. Jackson, Pres. Bd. Trustees; T. H. Carr, Cy. Clk.

SAN RAFAEL, CAL.—M. S. Davis, Jas. Coffin, Henry F. Allen and other property-owners living in the region included in San Anselmo, Ross Valley, Tamalpais and the Laurel and Sunnyside tracts, have petitioned the supervisors to appoint a board of sanitation, in accordance with the law, which shall be empowered to take action as regards the construction of a system draining the district described.

JEROME, ARIZ.—The council, it is stated, is taking steps toward building a system.

PRESCOTT, ARIZ.—Bids were asked until April 20 for constructing a system to cost $75,000. J. P. Bander, Clk.

LONDON, ONT.—Willis Chipman, Toronto, Ont., has submitted a report on the question of new storm sewers for this city.

PRESCOTT, ONT.—Bids are asked until June 1 for the purchase of $100,000 of 4% bonds for constructing the proposed system and water-works. Albert Whitney, Chn. Finance Com.

SMITHS FALLS, ONT.—Local papers state that Willis Chipman, 103 Bay St., Toronto, has been engaged to prepare plans for a system and water-works.

CHARLOTTETOWN, P. E. I.—Bids are asked until May 6 for furnishing the materials and for constructing a system. F. C. Coffin, Consult Engr., 53 State St., Boston, Mass.; Henry Smith, Chn. Comrs.

GARBAGE DISPOSAL—STREET CLEANING

MANCHESTER, N. H.—The committee is looking for a site for the proposed plant. H. P. Simpson, Chn. St. Com.; J. C. Bickford, Pres. Bd. Health, and S. J. Lord, Cy. Engr., compose the committee. They are reported to be in favor of the construction of a plant during the year. It recently visited Montreal to inspect the plant there.

LOWELL, MASS.—The board of health has let a contract for the collection and disposal of swill, garbage, offal, ashes, etc., to the Lowell Garbage & Cremation Co. at $26,500 a year for five years. A plant for the cremation of garbage, etc., is to be erected, and the material destroyed by cremation. The successful company was represented by J. R. Gilkyson, Trenton, N. J. The city has been spending about $40,000 a year in doing the work covered by this contract. The other bids were as follows: Thos. F. Fay, $18,000, swill to be disposed of as it was last year; John F. Murphy, $25,000 and $27,000, the two bids made previously; Philip P. Connors, $25,500, and another bid, with different provisions, $25,900; Lowell Sanitary Product Co., through Charles Stackpole, $25,000 and $26,800.

ALBANY, N. Y.—The council is again making efforts to build a plant and to adopt better methods of garbage collection.

BROOKLYN, N. Y.—At the council meeting April 18 the resolution providing for the issue of $569,399 of bonds to equip a street-cleaning plant in Brooklyn, Queens and Richmond, which has been held up in the council for several months, was finally passed, by a vote of 24 to 1. The resolution has already passed the aldermen, and will be signed by the mayor.

CAMDEN, N. J.—The Camden Reduction Co. has been incorporated to collect and dispose of garbage, night soil, dead animals, etc.; capital stock, $100,000. Incorporators: Benj. F. Howland and Chas. B. Livezey, Philadelphia, Pa.; Harry M. Knight, Camden, N. J.

LEXINGTON, KY.—Bids, it is stated, will soon be asked by the mayor for street cleaning for two years.

LOUISVILLE, KY.—The following bids were received by the committee April 17 for destroying the garbage, etc., and for erecting a crematory: Smead Crematory & Power Co., Toledo, O., construct a furnace, $58,000; it guarantees that the cost of incineration to the city will be 22½ cts. a ton; Dixon Garbage Crematory Co., Toledo, furnace, $60,000, $58,000 or $56,000, according to the style of building; the cost a ton will be 29 cts.; The Engle Sanitary & Cremative Co., Des Moines, $75,000; the cost a ton is 35 cts.; the American Sanitary Engineering Co., Detroit, $119,000; furnace will cremate garbage at a cost of 25 cts. a ton. Thackeray Incinerating, Fertilizing & Developing Co., Cincinnati, made three proposals. One is to erect a furnace with a capacity of 250 tons a day for $59,650. The second is to construct and operate a furnace for one year for $39,529, the city having the privilege to purchase within the year for $65,650. Rebates will be given by the company that will bring the price close to that in the first proposal. The third is to erect a furnace and charge an annual rental of $39,129.

NEWPORT, KY.—W. L. Glazier, Cy. Engr., writes us that bids were received on April 12 for collecting and removing garbage and ashes. The bids ranged from $6,800

to $7,800 a year. All bids rejected, and city is going to purchase wagons and horses and do work under direct supervision of Board of Improvements, at an estimated cost of $4,000 a year.

CINCINNATI, O.—Health Officer Tenney, it is stated, will recommend a new system of removing the garbage.

PORTLAND, ORE.—D. B. McIlwane, New York, has offered to build a new crematory. The board of public works wishes to sell its old plant, which cost the city about $12,000. Acting Mayor Storey may be addressed.

STREETS AND ROADS

WATERVILLE, ME.—I. E. Getchell, Cy. Engr., writes us that the city improvements have not yet been decided upon, nor have any appropriations yet been made. Probably some paving or macadamizing, or both, will be done; also asphalt walks.

WESTBROOK, ME.—Alderman Knowlton has presented an order to appropriate $3,000 for purchasing granite blocks and paving Main St.

BOSTON, MASS.—Bids are asked until 12 m., April 27, for macadamizing on three streets. Benj. W. Wells, Supt. Sts.——Bids are asked by the Metropolitan Park Commission until May 1 for constructing the Mystic Valley Parkway, including 18,000 cu. yds. of grading, 3,298 lin. ft. of pipe drain, 3,700 tons of broken stone, etc. Wm. T. Pierce, Engr.

HAVERHILL, MASS.—Bids are asked until May 15 for furnishing paving blocks, flagstones, etc., as stated in our advertising columns. B. W. Davis, Clk. Com.

PROVIDENCE, R. I.—Bids are asked until 11 a. m. April 28 for 8,000 sq. yds. of granite paving blocks, f. o. b. cars. Robert E. Smith, Comr. Dept. Pub. Wks.

HARTFORD, CONN.—Portions of Hopkins St., Farmington Ave. and seven other streets will be paved with sheet asphalt this season.

ALBANY, N. Y.—Bids are asked by the board of contract and apportionment until May 1 for furnishing the material and for brick paving, etc., on Second and Orange Sts.; brick paving and sewers on Howard and William Sts., and for a plank walk on Washington Ave. Thos. J. Lanahan, Clk.——Ordinances will be brought before the council for final reading May 1 for brick paving on six streets.

BUFFALO, N. Y.—The board of public works has received the lowest bids for paving from the Barber Asphalt Co., Grosvenor St., asphalt, $4,007; Ohio St., asphalt, $5,177; John Mumm, Grosvenor St., brick, $3,700; P. B. McNaughton, Ohio St., brick, $4,496.——The council proposes to pave portions of Carroll St., Duerstein, Edson Ave. and Lafayette Ave., and macadamize on Summit and Crescent Aves. Frank W. Gethoefer, Cy. Clk.

GLENS FALLS, N. Y.—Bids are asked until May 22 (postponement from May 15) for furnishing the material and for constructing about 18,000 sq. yds. of brick paving on concrete, as stated in our advertising columns. W. M. Cameron, Village Clk.

ITHACA, N. Y.—Bids are asked until 2 p. m. April 28 (postponement from April 24) for furnishing from 10,000 to 15,000 sq. yds. of repressed vitrified paving brick. C. C. Platt, Clk. of Paving Comn.

JOHNSTOWN, N. Y.—Jas. W. Miller, Cy. Engr., informs us that the council has decided to pave North Perry St., from Main St. to Decker St., about 4,500 ft., with brick.

MECHANICSVILLE, N. Y.—Silas Hayner, E. B. Bailey, Comrs., and two others, have completed surveys, etc., for a proposed road from Stillwater to Mechanicsville. The plans will be submitted to Judge Houghton for approval.

RHINEBECK, N. Y.—The town authorities propose to construct a road about 2,400 ft. long to shorten the distance to Rhinecliff station.

ROCHESTER, N. Y.—The council has passed final ordinances to pave Emerson St. with asphalt, at an estimated cost of $9,600; Stone St., Medina block, $12,800; Reynolds St., macadam, $8,700; Elm St., curb and gutter, $4,000; Monroe Ave., canal bridge approaches, Medina stone, $7,000; University Ave., Medina stone, $51,000, and Snyder St., cement walks, $1,800.

SYRACUSE, N. Y.——The city engineer has submitted plans and specifications for the paving of 10 streets.

WHITE PLAINS, N. Y.—Petition for paving about 8,000 sq. yds on Grove St. have been favorably reported and the engineer directed to prepare plans and specifications for the work.

YONKERS, N. Y.—A contract has been awarded to Grady, Kearns & Hart, at $35,200, for grading on Warburton Ave., according to reports.

CAMDEN, N. J.—The freeholders have voted to purchase the Camden, Ellisburg & Marlton Turnpike, at $37,373, and the Camden & Westfield Turnpike, at $30,007. It will cost about $16,000 to repair the former road. Bids will soon be asked for a stone road on Park Ave., at Merchantville. The plans for stoning Bettlewood Ave., at Collingswood, have been approved.

ELIZABETH, N. J.—Bids are asked until May 15 for 600 sq. yds. of Telford paving, 480 sq. yds. of trap block paving, 1,076 lin. ft. of curb to reset. N. K. Thompson, St. Comr.

HACKENSACK, N. J.—Bids are asked until May 4 for grading and macadamizing portions of 11 roads in Franklin township. Daniel Depew, Township Clk., Wyckoff; C. V. W. Fonda, Engr., 3202 Market St., Paterson.

NEWARK, N. J.——The board of street and water commissioners has passed ordinances to pave portions of five streets with sheet asphalt. Wm. E. Greathead, Clk.

PLAINFIELD, N. J.—Bids are asked until May 15 for macadamizing on West Third and West Fourth Sts. James T. MacMurray, Cy. Clk.

UNION, N. J.—Bids are asked until May 11 for asphalt paving, reflagging, recurbing, etc., as stated in our advertising columns. Chas. Singer, Jr., Town Clk.

BETHLEHEM, PA.—The council has voted to appropriate $14,000 for macadamizing Garrison St., according to reports.

CAMBRIDGE SPRINGS, PA.—Bids are asked until May 1 for paving about 475 sq. yds. Geo. L. Wade, Clk.

EASTON, PA.—Bids are asked until May 4 for filling and grading. H. R. Fehr, Cy. Engr.

JOHNSTOWN, PA.—Ordinances for the paving and improving of a number of streets, aggregating a cost of about $45,000, have been passed by the council.

LEBANON, PA.—The highway committee has recommended the paving of Eighth St.

POTTSVILLE, PA.—The highway department is considering the question of improving South Centre St.

WILKES-BARRE, PA.—Bids will soon be asked by the county commissioners of Luzerne county for the construction of about five miles of macadam road. N. B. Rutter, County Surv.

WASHINGTON, D. C.—Bids are asked by the district commissioners until May 20 for laying asphalt block pavements and for paving various streets and avenues with sheet asphalt, as stated in our advertising columns.

DANVILLE, VA.—The council has passed a resolution to petition the judge of the corporation court to call an election May 25 to vote on a proposition to issue $100,000 of bonds for street improvements.

PETERSBURG, VA.—Bids are asked until May 15 for laying from 11,888 to 29,221 sq. yds. of macadam paving, as stated in our advertising columns. Plans and specifications are on file at the office of the Engineering News Publishing Co., 220 Broadway, New York. W. H. Talley, St. Comr.

WILMINGTON, N. C.—A special election will be held May 2 to vote on the question of issuing $50,000 of bonds for county road improvements.

ATHENS, ALA.—A proposition to issue $100,000 of 5% county road bonds will be voted upon July 15, according to reports.

BIRMINGHAM, ALA.—Chairman Graham of the street committee has introduced several ordinances for street improvements.

DAYTON, TENN.—The county court has authorized the construction of a pike road from Spring City to Rhea Springs.

KNOXVILLE, TENN.—The county commissioners have decided to expend $18,000 for improving the Tazewell, Third Creek and Sevierville Pike roads, for which bids will soon be asked. F. G. Phillips, Engr.

LEXINGTON, KY.—John V. Upington informs us that it is proposed to pave about 2,400 ft. of streets 30 ft. wide with asphalt and about the same amount with brick. The asphalt paving will be acted upon first.

LOUISVILLE, KY.—Bids are asked by the board of public works until May 1 for grading, curbing and brick paving on Greenwood Ave.

CINCINNATI, O.—Bids are asked until May 22 for grading, curbing, flagging, draining, macadamizing and retaining walls on Delta Ave. Geo. H. Spellmire, Clk. Bd. of Cy. Affairs.

GENEVA, O.—D. G. Palmer, Mayor, writes us that the question of paving is being contemplated, but as yet it has not been decided just how much or with what material to pave.

IRONTON, O.—The county commissioners will improve the turnpikes this summer, at a cost of $8,000 or $10,000.

SHELBY, O.—An ordinance has been passed by the council to grade on Marvin Ave., North Gamble St. and Main St. W. F. Sonnanstine, Clk.

TOLEDO, O.—Petitions are being circulated by the property owners for the paving of Glenwood Ave., Hawley St. and Oakwood Ave.

BEDFORD, IND.—A contract has been awarded to N. R. Clarke for about nine miles of gravel roads in Perry township.

KNOXVILLE, IND.—Bids are asked until April 29 for brick paving on Main St., according to reports. Mark L. Bogarth, Clk.

MARION, IND.—Bids are asked until May 2 for improving Third St. Cyrus G. Robbins, Cy. Clk.

MARION, IND.—Bids are asked until May 9 for improving Washington St. with a combination of asphalt and brick and Delphi Ave. with brick, from Third St. to Western Ave., three blocks, 42 ft. wide. C. N. Martin, Councilman, informs us that it is proposed to pave four miles of street with asphalt; estimated cost, $150,000. L. M. Overman, Cy. Engr.

NEW CASTLE, IND.—S. P. Gennings informs us that an effort is being made to pave about 10 squares with brick, but as yet nothing definite has been done.

ROCKPORT, IND.—J. G. Rimstidt, County Audr., informs us that no bids were received April 21 for constructing the proposed 12 miles of macadam roads.

ROCKVILLE, IND.—Bids are asked by the county auditor until May 10 for constructing six gravel roads in Adams township, about 18 miles in length. John T. Campbell, Acting County Surv.

WESTSHOALS, IND.—Bids are asked until May 6 for about nine miles of macadam roads in Center township. Horatio Harryman, County Audr.

OWOSSO, MICH.—This place has voted to spend $15,000 this season for paving, according to reports.

SAGINAW, MICH.—The Barber Asphalt Co. has been awarded a contract for paving South Hamilton St., at $8,943, and Court St., at $44,443.

LUDINGTON, MICH.—The board of supervisors will ask the legislature for authority to issue $75,000 of road bonds.

KALAMAZOO, MICH.—Estimates of the cost of paving several streets are asked for by the city council. Considerable sewer work and brick paving will be done by the day labor system.

EAST ST. LOUIS, ILL.—Bids are asked until 12 m., April 28, for grading, curbing and about 29,750 sq. yds. of brick paving and for pipe sewers, etc., on Missouri Ave. M. M. Stephens, Mayor.

DENVER, COLO.—A petition has been signed by a majority of the land owners for the macadamizing of 23d Ave., about 15 blocks.

NEW WHATCOM, WASH.—Bids are asked until May 2 for grading and graveling of two miles of the Hollingsworth Road. Alex. Van Wyck, Clk. Bd. of County Comrs.

SPOKANE, WASH.—The estimated cost to pave the following streets has been submitted by the city engineer: Main Ave., Post to Division, $55,000; Sprague Ave., Monroe to Bernard, $37,000; Post St., railroad to Main Ave., $15,000; Howard St., railroad to Riverside, $8,300; Washington St., Sprague to Main, $8,000.

SANTA CRUZ, CAL.—Bids are asked until May 1 for grading the San Andreas Road a distance of 3,500 ft. H. H. Miller, County Clk.

MANUFACTURING PLANTS.

BIDDEFORD, ME.—The Saco River Lumber Company's mills were destroyed by fire, April 20; reported loss, about $40,000.

NORRIDGEWOCK, ME.—Reports state that a Philadelphia company has purchased the Bombazeen water power, and that a new pulp and paper mill, with a daily capacity of 100 tons, will be erected.

WARREN, R. I.—The Parker Mill Co. of Fall River, Mass., has voted to increase its capital stock from $500,000 to $800,000, and to erect a new building at Warren for the manufacture of textile goods.

GARDINER, MASS.—The plant of the Central Oil & Gas Stove Co. was damaged by fire, April 19; reported loss, $75,000.

HARTFORD, CONN.—The Berlin Iron Bridge Co., East Berlin, Conn., has the contract for the new roof on the east armory of the Colt's Fire Arms Mfg. Co. at Hartford. This roof is 60 x 500 ft., and is to be entirely recovered. The new roofing is to be the Berlin Iron Bridge Co.'s patent anti-condensation fireproof roof lining, consisting of anti-condensation lining underneath the corrugated iron outside covering.

HOOSICK FALLS, N. Y.—The plant of the Hoosick Falls Brewing Co. was destroyed by fire April 22; loss on building, about $40,000.

TROY, N. Y.—Plans have been prepared for a new 5-story and basement factory building to be erected by the International Shirt & Collar Co., at River and Adams Sts. E. W. Loth, Arch., 253 Broadway, Troy.

TROY, N. Y.—Van Zandt, Jacobs & Co., Troy, are having plans prepared for a new 5-story brick factory building on River St., 75 x 225 ft.

NEWARK, N. J.—Reports state that F. H. Richardson, of the Enos Richardson Co., is about to erect a 6-story factory building at Columbia and Greene Sts., to cost $55,000. Constable & Co., Archs., New York.

ALLEGHENY, PA.—The 4-story manufacturing building on Anderson St., near Church Ave. occupied by the Allegheny Machine Co., and others, was destroyed by fire April 23; reported loss, $35,000. Alexander Beggs & Sons, owners.

RICHMOND, VA.—The Kanawa Construction Co. has the contract for the construction and equipment of a mill for the James River Falls Paper & Pulp Co. The building will be of brick and iron and fireproof; capacity, 30 tons of paper and 15 tons of soda pulp daily. Pascal Davie, Pres., 1013 East Main St.

WESTON, W. VA.—It is announced that the West Virginia & Pittsburg R. R. Co. is going to adopt gas engines as the motive power for its new shops at Weston, which are to be completed in June; and are now in the market for two gas engines—one of 60-HP. for the machine shop and one of 35-HP. for the wood-working department; also for necessary shafting and belting.

MUSKEGON, MICH.—Reports state that E. Meuer, of Grand Mere, Quebec, will erect a sulphite pulp and paper mill at Muskegon; estimated cost, $300,000.

DETROIT, MICH.—Plans are being prepared for a building to be erected for the Michigan Optical Co, of 80 Miami Ave. A. C. Varney & Co., Archs.

FORT DODGE, IA.—Reports state that plans have been completed for a stucco mill to be erected in this city by R. W. Crawford, to cost about $50,000.

IOWA CITY, IA.—It is reported that bids are about to be received by the W. F. Main Co. for a brick factory building, 160 x 160 ft., to cost $30,000. Liebbe, Nourse & Rusmussen, Archs., Des Moines, Ia.

OMAHA, NEB.—The 5-story warehouse of the Kingman Implement Co. was completely destroyed by fire, April 23; reported loss, $170,000.

SIOUX FALLS, S. DAK.—Jewett Bros. & Jewett are said to contemplate the erection of a 4-story addition to its plant at Phillips Ave. and 5th St., to cost about $30,000.

LARDO, MEX.—The factory of the Great Aspiran Sea Soap & Oil factory at Lardo, has been destroyed by fire; reported loss, $300,000.

MANILA, PHILIPPINES.—Bids are asked until May 3 for furnishing and erecting a complete refrigerating and ice-making plant for the United States government at Manila. Col. J. G. C. Lee, Ch. Q. M., 415 Pullman Bldg., Chicago, Ill.

GAS PLANTS.

LOWELL, MASS.—Reports state that the Lowell Gas Light Co. proposes to extend its supply of gas to Chelmsford Center.

NEWARK, N. J.—E. H. Jenkins, C. L. Ingham and W. B. Cutler, of Buffalo, propose to take up the gas franchise of Michael Chadwick, and will construct a plant and about four miles of mains at a cost of about $40,000, according to reports.

PHILADELPHIA, PA.—It is rumored that Contractor Lewis Havens will construct a corrugated iron extension, 125 x 200 ft., at a cost of about $40,000, to the Point Breeze Gas Works, for the United Gas Improvement Co.

WILKES-BARRE, PA.—It is reported that the Wilkes-Barre gas works will be improved at a cost of $15,000; also that the Wyoming Valley Electric Light Co. will spend $25,000 for new engines, generators, etc.

MOUNDSVILLE, W. VA.—Reports state that a contract has been awarded to G. E. Foster, of Sistersville, for the development of 800 acres of oil lands near this place. D. E. Ofutt is interested.

BARBERTON, O.—Reports state that several thousand acres of oil lands have been purchased and the work of drilling wells will soon be commenced.

BEDFORD, IND.—Reports state that a franchise has been granted to W. C. Thompson, of Chicago, to operate a gas plant.

ADRIAN, MICH.—The Adrian Gas Co. has awarded a contract to the United Gas Improvement Co., Philadelphia, for installing Lowe water gas apparatus with a capacity of about 125,000 cu. ft. daily, according to reports.

ASHLAND, WIS.—The Ashland Lighting & St. Ry. Co. has placed a contract with the Parish Mfg. Co. for a gas holder 50 ft. in diameter and 40 ft. high.

DENVER, COLO.—It is reported that a 20-year franchise has been granted to the Mutual Gas Co. to construct a plant and lay mains, at a cost of about $125,000. J. P. Heisler, Vice-Pres.; F. H. Stickney, Treas.; Wm. H. Ridley, Secy.

DURANGO, COLO.—Jas. P. Airy, H. Jackson, W. G. White and C. C. Eddy are reported to have applied to the authorities for the right to construct and maintain gas works.

BUTTE, MONT.—The Butte Gas Light & Coke Co. has awarded a contract to the Western Gas Construction Co., Fort Wayne, Ind., for a new plant.

ROSSLAND, B. C.—Dr. P. E. Doolittle, of Toronto, proposes to establish a gas plant at this place.

NEW COMPANIES.—Lombart Gas Co., Booneville, Mo.; $30,000; R. A. Lombart.

Magnetic Oil & Gas Co., Dennison, O.; $5,000; W. J. Shrier, C. H. Smith, M. W. Young and others.

American Incandescent Gas Lighting Co., Trenton, N. J.; $2,000,000; to deal with a new method of incandescent gas lighting; Albert C. Burrage, Henry A. Norton, of Boston; Chas. H. Dickey, Baltimore.

Union Gas Co., Nashville, Tenn.; $500,000; E. C. Lewis, A. H. Robinson, C. C. Christopher.

Bridges' Dry Seal Acetylene Gas Machine Co., San Francisco, Cal.; $100,000; gas machines; W. A. Robertson, Alameda; F. C. Lewis, Wm. H. Schepper, John W. Bourdelle, of San Francisco.

Central Oil Co., Portland, Me.; $2,000,000; to prospect for oil and mining; Wm. L. Henry, Boston; Robert P. Clapp, Lexington, Mass.; Chas. H. Tolmon, Portland, Me.

Dallas Oil & Refining Co., Dallas, Tex.; $60,000; A. Fitzhugh, W. H. Thomas, George N. Aldredge.

New Philadelphia Oil & Gas Co., New Philadelphia, O.; $2,400; B. P. Scott, E. C. Browne, J. A. Linn.

People's Gas & Electric Co., Galesburg, Ill.; $100,000; J. T. McKnight, G. D. Crocker.

Cincinnati Natural Gas & Illuminating Co.; Cincinnati, O.; $1,000,000; to pipe gas from the sugar grove field near Lancaster, about 100 miles; also to go into the artificial gas business if the supply of natural gas fails; Robert Laidlaw, Geo. Bullock, John B. Morris and others.

CONTRACT PRICES.

BRICK PAVING.—Minneapolis, Minn.—A contract has been let to J. B. Canny for brick paving, on 6-in. concrete base, and cement fillers, on a 2-year guarantee, at $1.61 a sq. yd., and sandstone, sand foundation, cement filler, $18.15.

CULVERTS, ETC.—Illinois & Mississippi Canal, Ill.—We are informed that the following bids were received April 18, by Maj. W. L. Marshall, U.S.Engr., Chicago, for excavating pits and constructing foundations for seven arch culverts and for constructing 10 pipe culverts under the feeder of the Illinois & Mississippi Canal, and for other work and materials of same character, as advertised in Engineering News:

Bids Received at Chicago, Ill., April 18, 1899, for Construction of Culverts, Etc.; Ill. & Miss. Canal.

Quantities.		A. T. Young & Co., Chicago, Ill.	Monroe & Bryant, Portsmouth, O.	T. W. Kinser & Sons, Terre Haute, Ind.	Callahan Construction Co., Omaha, Neb.	Jackson & Hogan, Chicago, Ill.	H. A. Boedker & Co., Chicago, Ill.
First Group, Miles 1 to 18, Inclusive.							
Earth work	48,570 cu. yds.	$0.40	$0.35	$0.50	$0.25	$0.49	$0.26
Piles	1,002 each	4.50	4.80	5.14	4.00	6.99	4.00
Pine timber	90,893 ft. B.M.	26.50	26.90	34.00	28.00	29.00	27.00
Pine plank	38,412 " "	25.90	26.90	33.00	20.00	31.00	24.00
Oak plank	768 " "	50.00	50.00	50.00	35.00	43.00	40.00
Concrete: Nat Cem.—With crushd stone	1,166 cu. yds.	5.65	5.88	6.90	6.00	6.90	6.30
With pebbles	1,166 " "	5.65	3.45	6.90	4.75	6.90	4.55
Portland Cem.—With crushed stone	127 " "	7.45	8.90	9.00	8.50	9.90	8.30
With pebbles	127 " "	7.45	6.09	9.00	7.50	9.90	6.55
Drift bolts, nails and spikes	11,595 lbs.	.03	.035	.03	.025	.08	.03
Oak sheeting (common) contingent		55.00	45.00	50.00	28.00	43.00	40.00
Triple lap, oak sheeting	10,548 ft. B.M.	55.00	50.00	53.00	40.00	46.00	47.00
36-in. pipe, laid in work	240 lin. ft.	9.85	6.17	5.99	6.90	7.04	6.50
36-in. " delivered	48 " "	7.80	5.59	5.40	5.50	5.90	5.50
Rubble stone head walls	172 cu. yds.	7.90	7.75	10.00	8.50	9.00	7.00
Rubble stone paving	138 sq. yds.	1.95	1.90	2.75	2.50	3.90	1.75
48-in. pipe delivered	48 lin. ft.	11.40	8.33	7.85	7.00	8.40	8.00
48-in. pipe, laid in work	48 " "	13.45	9.25	8.91	7.75	10.18	10.00
Total—First Group		$41,400	$35,243	$48,528	$31,128	$50,329	$31,658
Second Group, Miles 19 to 28, Inclusive.							
Earth work	17,268 cu. yds.	$0.40	$0.31	$0.50	$0.25	$0.49	$0.16
Concrete: Port.Cem.—With crushd stne	133 " "	8.30	8.90	9.00	8.50	9.90	10.00
With pebbles	133 " "	8.30	7.50	9.00	7.50	9.90	8.25
Natural Cement—With crushd stone	580 " "	6.30	5.88	6.90	6.00	6.90	8.50
With pebbles	580 " "	6.30	5.45	6.90	4.75	6.90	7.00
Rubble stone head walls	324 " "	9.50	7.75	10.00	8.50	9.00	9.00
Rubble stone paving	755 sq. yds.	2.60	2.15	2.75	2.50	3.90	2.25
48-in. cast-iron pipe. Cased and caulked, contingent		13.80	9.25	8.91	9.85	10.18	9.50
48-in. cast-iron pipe. Delivered at culverts, contingent		12.00	8.33	7.85	7.00	8.40	8.00
48-in. cast-iron pipe. Delivered at bridge crossings, contingent		11.50	8.33	7.85	7.00	8.40	8.00
48-in. cast-iron pipe. Laid and caulked	1,668 lin. ft.	13.80	9.25	8.91	7.75	10.18	9.50
24-in. cast-iron pipe, delivered contingent		4.00	3.09	3.00	3.00	3.65	3.00
Laid	96 lin. ft.	5.60	3.48	3.50	3.40	4.48	3.40
18-in. pipe, laid	204 " "	4.50	2.43	2.75	2.75	3.88	2.40
Total—Second Group		$41,180	$29,905	$34,908	$26,525	$37,842	$29,197
Grand total		$82,580	$65,148	$83,431	$57,654	$88,172	$60,855

Substituting concrete with crushed stone for concrete with pebbles the two lowest bids are Callahan Construction Co., $60,096, and H. A. Boedker & Co., $64,220. In arriving at totals, cost of cement concrete with crushed stone is not included.

BRIDGE SUPERSTRUCTURE.—Providence, R. I.—We are informed that the following bids were received April 12, 1899, for the steel superstructure of the Mill St. bridge over the Moshassuck River, as advertised in Engineering News:

Bidder.	Steel, 216,000 lbs.	C.i. bed plates, 2,700 lbs.	Steel rail'g, 155 lin.ft.	C.-i. cornice, 155 lin.ft.	Total.
Boston Bridge Works	$0.0580	$0.025	$3.50	$3.00	$11,443
Groton Bdge & Mfg. Co.	.0485	.03	3.60	3.20	11,611
N. Eng. Structural Co.	.0487	.0275	3.45	3.20	11,624
Youngstown Bridge Co.	.0486	.0264	3.63	3.25	11,635
Massillon Bridge Co.	.049	.0325	3.25	3.40	11,703
Toledo Bridge Co.	.0488	.05	3.92	3.42	11,814
M. Moulton, Springfield.	.0496	.0260	3.75	3.00	11,830
Canton Bridge Co.	.0493	.04	3.60	3.45	11,850
R. F. Hawkins I. Works	.0495	.03	3.50	3.50	11,858
J. H. Tower, Providence	.0497	.06	3.10	3.25	11,881
King Bridge Co.	.0499	.0325	3.75	3.00	11,912
Wrought Iron Bdge Co.	.0498	.0360	3.70	3.45	11,962
Variety Iron Works Co.	.0515	.035	3.80	3.10	12,288
Springfield Const'n Co.	.052	.02	3.90	3.25	12,394

MACADAMIZING.—Newark, N. J.—Thos. McGowan, Dir. Bd. Chosen Freeholders, Bloomfield, writes us that the following bids were received April 13, 1899, for macadamizing three roads:

Bidder.	8-in. Telford pvmt.	Grading.	
Bloomfield Ave., Dutch Lane to Pine Brook, Caldwell:	14,500 sq.yds.	2,000 cu.yds.	Total
Wright & Lindsley, Orange, N. J.	$0.46	$0.30	$7,270
*Francesco Bros., Little Falls	.43	.29	6,815
F. W. Shrump, West Orange, N.J.	.595	.35	9,327
Fairfield road, Caldwell, Pine Brook to Two Bridges:	38,000 sq.yds.	6,000 cu.yds.	Total.
Wright & Lindsley, Orange, N. J.	$0.49	$0.30	$20,400
*Francesco Bros., Little Falls	.44	.29	18,460
Francis J. Marley, Little Falls	.49	.27	20,620
F. W. Shrump, West Orange, N.J.	.62	.35	25,660
Mount Hebron road, Montclair:	10,000 sq.yds.	5,000 cu.yds.	Total.
*Wright & Lindsley, Orange, N.J.	$0.43	.....	$4,300
Osborn & Marcellus, Upper Montcl'r	.38	.....	3,800

*Awarded contracts.

BRICK PAVING.—Akron, O.—John W. Payne, Cy.Engr., informs us that the following bids were received April 15, 1899, for brick paving; all local bidders except Herring & Son of Mansfield, O.:

Quantities.		P. T. McCourt.	Herring & Son.	McCourt & Davidson.	Wigley Bros.	Jas. Wildes & Son.
Crosby St., from Maple to Hall.						
Excavation.	2,575 cu. yds.	$0.16	$0.15	$0.13	$0.20	$0.17
Curb: Strght	200 lin. ft.	.34	.33	.35	.34	.34
Redrs, &c.	2,804 " "	.10	.06	.10	.10	.10
Circular	19 " "	.43	.45	.45	.47	.55
Slag in place	1,132 cu. yds.	.90	.80	.85	.90	.90
Akron brick	5,092 sq. yds.	.63	.59¾	.59	.63	.63
Tar filler	42 tons	3.00	3.50	4.00	4.50	4.00
Total		$5,121	$4,724	$4,828	$5,288	$5,191

Herring & Son awarded this contract.

Quantities.		P. T. McCourt.	Herring & Son.	McCourt & Davidson.	Wigley Bros.	Jas. Wildes & Son.
Maple St., Bitman to Bare.						
Excavat'n	10,480 cu. yds.	$0.12	$0.14	.....	$0.20	$0.10
Curb: Strght	5,786 lin. ft.	.31	.33	.....	.34	.33
Circular	170 " "	.47	.45	.....	.47	.45
Slag ballast	2,531 cu. yds.	.875	.80	.....	.90	.83
Brick	11,377 sq. yds.	.62	.59¾	.....	.61	.59
Tar filler	95 tons	3.00	3.50	.....	4.50	3.50
Total		12,685	12,608	.....	13,789	12,236

Jas. Wildes & Son awarded this contract.

TRUNK SEWER.—Akron, O.—John W. Payne, Cy.Engr., informs us that the following bids were received April 15 for building a trunk sewer; tunnel is for 3-ft. brick sewer through a hill; bids are for this complete per lin. ft; the totals do not include rock excavation, for which an allowance of $1.25 a cu. yd. is made in specifications; estimated amount 7,000 cu. yds.; all but Adams Bros., Zanesville, and Greenville Construction Co., Greenville, are local bidders; James Wildes & Son received award:

Bids Received at Akron, O., April 15, 1899, for Building a Trunk Sewer.

Quantities.		Hunt & O'Neil.	Hallinan Bros.	McCourt & Davidson.	Adams Bros.	S. C. McGowan.	Jas. Wildes & Son.	Jos. Hugill.	Greenville Construction Co.
Trenching, 0 to 6 ft. deep	2,400 lin. ft.	$0.70	$0.90	$0.50	$1.04	$1.20	$0.35	$0.50	$0.40
" 6 " 8 " "	2,787 " "	.80	.90	.75	1.22	1.20	.45	.65	.50
" 8 " 10 " "	4,571 " "	.90	1.15	1.10	1.40	1.20	.65	.70	.60
" 10 " 12 " "	3,265 " "	1.00	1.25	1.15	1.58	1.20	.80	.80	1.03
" 12 " 14 " "	2,025 " "	1.10	1.40	1.25	1.76	1.20	.90	1.00	1.20
" 14 " 16 " "	1,107 " "	1.25	1.90	1.30	1.94	1.20	1.00	1.50	1.50
" 16 " 18 " "	717 " "	1.50	2.20	1.50	2.12	1.20	1.25	2.00	2.00
" 18 " 20 " "	1,107 " "	1.60	2.80	1.75	2.30	1.20	1.50	2.50	2.40
" 20 " 22 " "	419 " "	1.75	3.30	2.00	2.48	1.20	2.25	3.00	3.00
" 22 " 24 " "	20 " "	2.00	4.60	2.10	2.66	1.20	4.00	3.50	3.50
" 24 " 26 " "	57 " "	2.50	5.00	2.50	2.84	1.20	5.00	3.75	4.00
Laying 12-in. pipe	250 " "	.02	.05	.03	.10	.20	.14	.05	.10
" 15-in. "	3,175 " "	.02	.05	.03	.10	.20	.14	.07	.10
" 18-in. "	8,225 " "	.02	.05	.04	.10	.20	.14	.07	.15
" 20-in. "	1,375 " "	.02	.05	.05	.10	.20	.14	.08	.20
Iron pipe	425 tons	31.75	28.00	28.00	30.00	29.00	27.25	27.00	30.75
Furnishing 12-in. sewer pipe	250 " "	.165	.20	.18	.17	.20	.17	.18	.17
" 15-in. " "	2,885 " "	.24	.25	.26	.25	.25	.24	.24	.25
" 18-in. " "	8,091 " "	.33	.35	.35	.34	.32	.33	.34	.34
" 20-in. " "	1,267 " "	.43	.45	.45	.45	.50	.43	.44	.45
" 12-in. branches	..... each	1.00	1.10	.73	.75	.60	.95	1.00	.80
" 15-in. "	145 "	1.07	1.13	1.07	1.14	1.00	1.07	1.10	1.15
" 18-in. "	67 "	1.45	1.43	1.50	1.53	1.40	1.45	1.50	1.60
" 20-in. "	54 "	1.93	2.05	1.95	2.03	1.90	1.93	2.00	2.05
Concrete	400 cu. yds.	.30	4.60	3.50	5.00	3.00	3.00	3.50	4.00
Brick	1,239 cu. ft.	.50	.25	.35	.32	.40	.35	.31	.50
Tunnel	425 lin. ft.	9.00	9.75	10.00	10.00	8.00	9.75	14.00	10.00
Total		$41,469	$48,777	$43,153	$53,756	$46,561	$37,965	$42,059	$44,020

WATER PIPE.—Detroit, Mich.—The water commission received only the following two bids April 12, 1899, for furnishing cast-iron water pipe: American Car & Foundry Co., $22.50 a ton for all amounts under 500 tons, and $23.50 for all over that amount. The United States Cast-Iron Pipe Co., $22.25 and $23.25 a ton, respectively. Last year the board paid about $15 a ton.

MISCELLANEOUS CONTRACTS.

BONDS.—Elizabeth City, N. C.—It is reported that the question of issuing $30,000 of improvement bonds will be voted upon May 8.

EXPLOSIVES.—Vicksburg, Miss.—Bids are asked until May 12 for furnishing explosives for one year. Maj. J. H. Willard, U. S. Engr.

STORAGE BATTERY.—Woburn, Mass.—An order for a loan of $1,100 for a storage battery for the fire alarm system has been read in the council.

BOILER, ETC.—Stockton, Cal.—Bids are asked by the fire department until 5 p. m., April 27, for a new boiler and repairs to the steam fire engine No. 4.

GUN FORGINGS.—Washington, D. C.—Bids are asked until May 8 for 61 sets of 5-in. gun forgings. Chas. O'Neil, Ch. Bureau of Ordnance, Navy Dept.

REMOVING WRECK.—Boston, Mass.—Bids are asked until May 17 for removing a wreck in the Weymouth River, Mass. Col. Chas. R. Suter, U. S. Engr.

DOCK.—West Superior, Wis.—The Northern Pacific Co. has awarded a contract to John Frankham, of Minneapolis, for an additional dock, 175 × 1,000 ft.

DREDGING.—Chicago, Ill.—Bids are asked until May 25 for dredging in Calumet River, as stated in our advertising columns. Maj. W. L. Marshall, U. S. Engr.

PHOTOGRAPHIC SUPPLIES.—Washington, D. C.—Bids are asked until April 29 for furnishing photographic supplies. M. R. Thorp, Ch. Supply Div., War Dept.

TELEPHONES.—New York, N. Y.—The People's Telephone Co. proposes to secure a franchise to operate in this city. A. Wilford Hale, Oscar A. Shaw and D. P. Cobb are interested.

EXCAVATING.—Oswego, N. Y.—Bids are asked until May 22 for excavating in the St. Lawrence River, N. Y., as stated in our advertising columns. Capt. Graham D. Fitch, U. S. Engr.

PARK WORK.—New York, N. Y.—Bids are asked until May 4 for constructing a portion of Claremont Park, Bronx Borough. G. C. Clausen, Park Comr., Arsenal, Central Park, New York.

CEMENT.—Louisville, Ky.—Bids are asked until May 22 for furnishing Portland cement at lock No. 5, Green River, Ky., as stated in our advertising columns. Capt. Geo. A. Zinn, U. S. Engr.

DOCK GATES.—Boston, Mass.—Bids are asked until May 13 for constructing new swinging gates for dry dock No. 1, at the navy yard. M. T. Endicott, Ch. Bureau of Yards and Docks, Washington.

UNDERGROUND WIRE.—New Haven, Conn.—Bids are asked until April 28 for furnishing 26,000 ft. of Okonite wire, No. 14 B and S gage, for underground conduits. Clarence G. Ames, Pres. Bd. of Fire Comrs.

PARK WORK.—Baltimore, Md.—A committee has been appointed by the Southwest Baltimore Improvement Association for the extension and improvement of Carroll Park to Bayard St. August F. Becker, Chn.

REMOVING DIRT, ETC.—Lebanon, Pa.—Bids are asked until May 2 for stripping from the ore and removing about 12,000 cu. yds. of material for the Cornwall Ore Banks Co. T. R. Crowell, Engr., Room 9, Nutting Bldg.

TELEPHONE LINE.—Laramie, Wyo.—A. J. Vance, of Salt Lake, Utah, has been soliciting subscribers for the Bell Telephone Co. for a system at this place. It is also proposed to construct a line this summer from Laramie to Denver.

LOCOMOTIVES, DUMP CARS, ETC.—Indianapolis, Ind.—The Harry W. Schuh Construction Co. desires to purchase second-hand equipment in dump cars and locomotives, etc. Address S. T. Stratton, Mgr., 911 Stevenson Bldg.

DREDGING.—Mississippi.—Bids are asked until May 25 for dredging in Ship Island Pass, at the mouth of the Pearl River, in Pascagoula and Horn Island Harbor, as stated in our advertising columns. Maj. Wm. T. Rossell, U. S. Engr., Mobile, Ala.

DRAINAGE CANAL AND PUMPS.—New Orleans, La.—Bids are asked until about July 5 for additional work on the pumping stations and drainage canals; estimated cost, about $500,000. F. G. Freret, Secy. Drainage Com., City Hall; B. M. Harrod, Ch. Engr.

TRANSPORTING RIFLES.—Sandy Hook, N. J.—Bids have been received by the quartermaster's department, Army Bldg., New York, for transporting from Sandy Hook to Boston Harbor, three 12-in. B. L. steel rifles, 37 ft. long and weighing 116,400 lbs. each, from the Merritt & Chapman Wrecking Co., at $3,950, and Alfred Sorensen, Boston, at $4,243.

HARBOR WORK.—Wisconsin.—Bids are asked until May 25 for harbor of refuge, Milwaukee Bay, breakwater construction; Racine Harbor, crib pier, breakwater, removal of old pier, and dredging; Kenosha Harbor, pile and crib piers, crib breakwater, removal of old pier and dredging, as stated in our advertising columns. Capt. J. G, Warren, U. S. Engr., Milwaukee, Wis.

COAL HOIST TOWER.—Springvalley, Ill.—It is reported that a contract has been awarded to the Pittsburg Bridge Co., at about $75,000, for constructing a steel coal hoisting tower, 70 ft. high and requiring about 120 tons of steel, for the Springvalley Coal Mining Co.

PARK WORK.—Indianapolis, Ind.—The park board will receive an appropriation of about $149,000 to expend for parks this year, including the money that has been spent for improvements and maintenance up to date, and $30,000 that will be received from the street railway company.

PARK WORK.—San Francisco, Cal.—An election will be held May 23 to vote on the question of acquiring lands to extend the park panhandle to Van Ness Ave., and to connect the park with the Persidio by a boulevard, at a cost of about $3,500,000. The money is to be raised by issuing 20-year bonds at 3½%.

REVETMENT AND FILLING.—Toledo, O.—Bids are asked by the Toledo centennial commission until May 13 for the construction of the proposed revetment and dock and for the necessary dredging and filling at Bay View Park, as stated in our advertising columns. W. S. Sherman, Engr., 613 Nasby Bldg.

TELEPHONE WORK.—Tyndall, S. Dak.—The county commissioners have granted permission to the Bon Homme County Telephone Co. to use the public highways for its lines. About 80 miles of wire will be put in during the early summer, according to reports. Judge W. T. Williams and Dr. S. G. Berry are interested.

CANAL.—Montreal, Que.—Reports state that the Dominion Syndicate, Ltd., has been organized in London, with a capital stock of about $2,500,000, to construct the Georgian Bay Canal within three years, and to develop electrical, mineral pulp and other industries along the route. Sir Edward Thornton, Chn.; Sir Benjamin Baker, Consult. Engr., 2 Queens Square Place, S. W., London; Lord Kelvin, Consult. Electrical Engr.

PARK WORK.—Boston, Mass.—The committee on Metropolitan affairs has reported to the legislature an appropriation of $300,000 under the metropolitan park act, and of $500,000 under the boulevard act, for the construction of metropolitan parks and boulevards. The report is based on petitions for construction in Lynn, Winthrop, Chelsea and Quincy, including a boulevard from Revere Beach to Chelsea, known as the Snake River boulevard.

DAM AND WEIRS.—Cincinnati, O.—We are informed that the following bids were received April 12 for 168 ft. of Chanoine dam, etc., at dam No. 6, Ohio River, advertised in Engineering News. Maj. W. H. Bixby, U. S. Engr.:

George F. Egan, Grant Ave., Allegheny, Pa.	$216,483
Evansville Contract Co., Evansville, Ind.	174,981
I. V. Hoag, Jr., 170 South Ave., Allegheny, Pa.	233,951
Sloan, McIlvain & Graham, Allegheny, Pa.	200,276
A. W. McDonald, Steubenville, O.	193,532
Wm. B. Rodgers, 321 Water St., Pittsburg, Pa.	198,395

DAMS AND SHORE PROTECTION.—Rock Island, Ill.—Bids are asked until May 31 for constructing dams and shore protections: between Winona, Minn., and La Crosse, Wis.; Lansing, Ia., and Cassville, Wis.; Cassville, Wis., and Dubuque, Ia.; Dubuque and Leclaire, Ia.; Rock Island and New Boston, Ill.; New Boston, Ill., and Burlington, Ia.; Burlington and Montrose, Ia.; Keokuk, Ia., and Quincy, Ill.; Quincy, Ill., and Saverton, Mo.; Hamburg, Ill., and mouth of Illinois River; for construction of levees between Flint Creek and Iowa River, Ia.; and for dredging in Quincy Bay, Ill., as stated in our advertising columns. Capt. C. McD. Townsend, U. S. Engr.

NAVY YARD WORK.—San Francisco, Cal.—We are informed that considerable construction is under way at the navy yard at Mare Island. Healy & Tibbits are at work on 400 ft. of new quay wall, and have just begun on a plumbers', tinners' and paint shop, 60 × 130 ft., of steel construction. The California Bridge Co. has a contract for a new saw-mill to replace the one destroyed by the earthquake in 1898, and have begun on the foundation. This will be a brick-filled steel structure, 60 × 396 ft., two stories high. The San Francisco Bridge Co. is laying a pipe line a mile long to pump material from outer bar channel to basin on the island north of Mag, and will begin dredging at this point at once. Work has been commenced on 12 new officers' quarters by Hansbrough & Co., San Francisco. The yard has nearly completed a timber shed, 60 × 400 ft., of steel, and have foundations for four cylinder coal tanks practically completed. These tanks will be 40 ft. in diameter by 50 ft. high, and are located 205 ft. back from the quay wall. A contract for handling machinery has been let to the Brown Hoisting & Conveying Machine Co., Cleveland. The tanks will be of steel plate, erected by the yard, and work will begin at once. R. C. Hollyday, Civil Engr., U. S. N., is in charge of the above work.

CONTRACT PRICES.

BRIDGE PIERS. ETC.—Providence, R. I.—We are informed that the following bids were received April 7 for abutment walls and pier from Exchange Bridge northerly; Robt. E. Smith, Comr. Pub Wks.:

Bids Received at Providence, R. I., April 7, 1899, for Construction of Bridge Piers, Etc.

Quantities.		Ross & Fowler, Ipswich, Mass.	Norcross Bros., Providence, R. I.	J. T. Tank & Co., Providence, R. I.	James McKinnon, Providence, R. I.	T. H. Riddle, New Brunswick, N. J.	Fred'k E. Shaw, Provid'nce, R. I.
Excavation	3,250 cu. yds.	$0.75	$0.65	$1.00	$0.90	$1.50	$1.50
Old piles pulled	560 each	2.50	2.30	1.50	1.75	1.50	3.00
Old piles cut off	190 "	.50	.20	.50	.60	1.00	.50
Rip-rap	150 cu. yds.	3.00	2.47	2.00	2.00	2.00	2.00
Concrete	245 " "	4.00	3.56	4.00	4.75	4.50	3.00
Spruce piles	413 each	5.00	4.97	4.25	4.60	5.00	4.00
Hemlock platform	35,900 ft. B.M.	28.00	23.00	20.00	21.50	25.00	25.00
Coping reset	58 lin. ft.	.50	.25	.50	.50	1.00	.50
New coping	287 " "	2,75	4.32	3.00	3.75	3.00	3.00
Masonry in walls	1,203 cu. yds.	8.20	9.90	10.75	12.00	11.00	12.40
Pier masonry	33 " "	50.00	38.00	48.00	37.00	50.00	30.00
Pier masonry reset	7 " "	6.50	6.00	48.00	5.00	10.00	25.00
Total		$20,811	$22,020	$23,681	$25,952	$26,142	$27,207
Date of completion		90 days.*	Aug. 31,'99	Aug. 15,'99	Oct. 7, '99.	Aug. 15,'99	Sept. 1, '99

*From date of award of contract.

MATERIAL FOR BREAKWATER.—Marquette, Mich.—We are informed that Maj. Clinton B. Sears, U. S. Engr., Duluth, Minn, received the following bids, April 17, 1899, for furnishing materials for concrete superstructure for breakwater at Marquette, as advertised in Engineering News: (1) being for natural cement, 3,700 bbls.; (2) Portland cement, 800 bbls.; (3) broken stone, 2,800 cu. yds.; (4) sand, 1,400 cu. yds.; (5) timber, 2 × 8 ins. × 16 ft., 10,000 ft., B. M.; (6) timber, 2 × 6 ins. × 16 ft., 1,000 ft., B. M.; (7) timber, standard assorted, mill sizes, 10,000 ft., B. M.; (8) rubber waist boots, 12 pairs; (9) rubber hip boots, 30 pairs; (10) flat bar iron, 6 × ¼ ins., 700 lbs.; (11) round bar iron, ⅞ ins, 2,800 lbs.; (12) wire nails, 1,000 lbs; (13) railroad spikes, 3½ × ⅜ ins., 600 lbs.; (14) square nuts for ⅞-in. bolts, 200 lbs.; (15) splice bars with nuts and bolts, 400 lbs., 100 sets, per lb.; (16) 8-oz., 40-in. burlop, 1,333 lbs.; (17) No. 1 tarred felt, 1,500 lbs.; (18) two-ply sewing twine, 60 lbs.; (19) sailors' needles, 4 ins. long, 1 doz.: Wm. T. Berthelet, Milwaukee, Wis., (1) $1.04; Keystone cement, Fowler & Pay, Mankato, Minn., (1) $1.43; Austin cement; F. B. Spear & Sons, Marquette, Mich., (2) $2.40, Atlas cement; Kelley Island Lime & Transport Co., Cleveland, O., (2) $2.35, Lehigh cement; Nelson D. Hodgkins, Marquette, (3) $1.60; (4) 50 cts.; Alexander Sang, Duluth, Minn., (3) $1.80; (4) 45 cts.; (5, 6 and 7) $20, bids too high and were rejected; Powell & Mitchell, Marquette, (3) $2.15; Thompson C. Gill & Co., Philadelphia, (8) $8.33, (9) $3.99, bids too high and were rejected; (10) 2 74-100 cts.; (11) 2 24-100 cts.; (12) 2 99-100 cts.; (13) 2 59-100 cts.; (14) 3 55-100 cts.; (15) 2 99-100 cts.; (16) 8 74-100 cts.; (17) 3 24-100 cts.; (18) 9½ cts.; (19) $1.00; Marshall Wells Hardware Co., Duluth, (10) 2 35-100 cts.; (11) 2 3-10 cts.; (12) 2 53-100 cts.; (13) 2¾ cts.; (14) 2¾ cts.; (15) 5½ cts.; (16) 8 1-10 cts.; (17) 1¾ cts.; (18) 9 cts.; (19) 20 cts.

SEWERS.—North Braddock, Pa.—The following bids were received April 13 for constructing a system, as advertised in Engineering News; S. A. Taylor, Engr., 339 5th Ave., Pittsburg:

Bids Received at North Braddock, Pa., April 13, 1899, for the Construction of a Sewerage System.

Sixth St. Sewer, North Braddock Borough.

Items and quantities.		Ott Bros.	Rosser & Howell.	Keeling & Ridge.	Sloan & McIlvain.	Cronin & O'Herron.	Thomas McNally.	John McQuade
Masonry, a cu. yd.		$12.00	$8.00	$12.00	$9.00	$12.00	$18.00	$10.50
Rip-rap, a cu. yd.		2.00	3.50	4.00	2.00	2.50	1.50	1.50
Concrete, a cu. yd.		4.50	8.00	6.00	4.00	4.25	5.00	6.00
Manholes	12 each	27.00	40.00	25.00	30.00	28.00	49.00	40.00
Lampholes	2 "	5.00	6.00	5.00	6.00	5.00	3.75	5.00
Drops	6 "	57.00	60.00	65.00	60.00	55.00	76.00	60.00
Flushtank		60.00	45.00	50.00	50.00	50.00	13.50	90.00
6 ft. sewer	1,850 lin. ft.	7.20	10.00	7.60	6.00	7.50	8.57	7.66
5½ ft. sewer	750 " "	6.07	9.00	7.00	5.30	7.00	7.68	6.71
4½ ft. sewer	870 " "	5.25	7.50	4.80	4.40	5.34	6.80	5.28
30-in. pipe	300 " "	2.95	2.25	3.00	2,38	3.13	3.30	2.97
12-in. "	150 " "	.70	.80	1.00	1.00	1.25	....	.70
6-in. "	56 " "	.40	.35	.35	.50	.75	.40	.65
12-in. Y's, each		1.00	1.00	1.00	.73	1.50	.80	.65
8-in. " "		.50	.75	.75	.50	1.25	.30	.50
30-in. " "		4.50	5.00	5.00	....	10.00	2.00	8.00
Lumber, a M ft.		17.00	25.00	25.00	12.00	20.00	30.00	20.00
Total		$24.263	$33,442	$25,271	$20,527	$25,595	$29,593	$27,680

Hawkins Ave. Sewer.

Quantities.		Ott Bros.	Rosser & Howell.	Sloan & McIlvain.	Cronin & O'Herron.	John Dell.	J. F. Casey	N.M. Spaeth	Ang. Pandolfo.	James McQuade.	Cona Acceta
Concrete, a cu. yd.		$4.50	$8.00	$4.00	$4.75	$4.50	$10.00	$6.00	$5.00	$6.00	$5.50
Manholes	14 each	30.00	40.00	30.00	28.00	28.00	32.00	35.00	38.00	40.00	40.00
Lampholes	3 "	6.00	6.00	6.00	5.00	5.00	2.00	6.00	4.00	5.00	5.50
Drops	20 "	60.00	60.00	60.00	55.00	40.00	60.00	50.00	40.00	60.00	59.00
Flushtank single and double	2 "	60.00	45.00	50.00	50.00	40.00	60.00	50.00	40.00	90.00	60.00
18-in. pipe	800 lin. ft.	.67	.90	.69	.95	1.00	.90	.75	.91	.12	.76
15-in. "	260 " "	.65	2.80	1.25	1.15	.75	.73	.59	1.48	1.42	2.65
12-in. "	250 " "	.45	.80	1.00	1.00	.60	.64	.40	.50	.70	1.02
9-in. "	280 " "	.33	.55	.65	.76	.50	.63	.53	.65	.70	.25
8-in. "	4,065 " "	.58	.50	.90	.70	.40	.63	.42	.62	.70	.97
6-in. "	1,400 " "	.75	.35	.50	.45	.33	.58	.48	.34	.65	.59
Lumber, a M. ft.		18.00	...	12.00	20.00	15.00	30.00	20.00	18.00	20.00	15.00
18-in. Y's		7.50	1.00	.50	1.00	...	1.25	1.80	20.00	1.75	2.25
15-in. "		.70	.80	.40	.75	...	.95	.12	.20	1.00	1.50
12-in. "		.65	.70	.35	.50	...	.80	1.42	.20	.75	1.10
10-in. "		.50	.60	.30	.50	...	.40	1.24	.20	.60	.75
8-in. "		.50	.40	.25	.33	...	.40	.48	.20	.50	.75
Total		$6,157	$6,193	$7,416	$6,604	$4,660	$6,391	$4,989	$5,840	$7,443	$8,884

Corey, Center and Charles St. Sewers.—The following are bids where they differ from those for the Hawkins Ave. sewer: (1) being for 2 lampholes, (2) for 14 drops, (3) for 2 flushtanks, (4) for 1,400 ft, of 24-in. sewer pipe, (5) for 1,500 ft. of 12-in. pipe, (6) for 100 ft. of 9-in. pipe, (7) for 600 ft. of 8-in. pipe, (8) for 1,200 ft. of 6-in. pipe, (9) for lumber, (10) for 24-in. Y's, (11) for 12-in. Y's, (12) for 10-in. Y's, (13) for 8-in. Y's, (14) totals: Ott Bros., (1) $5, (2) $55, (4) $1.30, (5) 97 cts., (6) 65 cts., (7) 65 cts., (8) 65 cts., (10) $1, (11) 90 cts., (12) 80 cts., (14) $5,840; Rosser & Howell, (4) $1.10, (6) 65 cts., (7) 70 cts., (9) $20, (10) $2, (11) 60 cts., (12) 50 cts., (14) $5,027; Sloan & McIlvain, (4) $1.39, (6) 75 cts., (7) 75 cts., (10) 75 cts., (14) $5,853; Cronin & O'Herron, (4) $1.75, (5) $1.13, (7) 96 cts., (8) 44 cts., (10) $2, (12) 45 cts., (13) 35 cts., (14) $6,513; John Dell, (3) $45, (4) $1.30, (14) $4,374; J. F. Casey, (1) $3, (2) $70, (4) $1.70, (5) 74 cts., (6) 66 cts., (7) 66 cts., (8) 60 cts., (10) $1.50, (11) 95 cts., (12) 80 cts., (14) $6,194; N. M. Spaeth, (4) $1.14, (5) 61 cts., (6) 57 cts., (7) 56 cts., (10) $2.65, (13) $1.18, (14) $4,677; Angello Pandolfo, (4) $1.00, (5) 69 cts., (6) 67 cts., (7) 65 cts., (8) 35 cts., (10) 20 cts., (14) $4,533; John H. McQuade, (4) $1.45. (10) $3.25, (14) $5,920; Cona. Acceta, (4) $1.37, (10) $3.50, (14) $6,355.

LAYING AND HAULING WATER PIPE.—Milwaukee, Wis.—The board of public works on April 11, 1899, awarded the contract for laying water mains and furnishing the requisite material during the year 1899 to Charles Forrestal, at 17 7-10 cts. for 6-in. pipe a lin. ft., 24 cts. for 8-in. pipe, and 35 cts. for 12-in. pipe. B. Welch, of the Third Ward, was awarded the contract for hauling and delivering water pipes, hydrants and special castings for the ensuing year at 40 cts. for water pipe from the yard to the street where they are to be laid, 60 cts. a load for hydrants from the depots or docks to the yard, and $1.20 a load for hydrants from the yard to the streets where they are to be used.

BRICK PAVING.—Scranton, Pa.—We are informed that the following bids were received April 13 for 6,800 yds. of brick paving on 6-in. concrete base in Sanderson Ave.; guarantee, five years; also for setting 6 15-in. curb on a bed of 6 ins. of concrete; both bidders are of this city; Jos. P. Phillips, Cy. Engr.; Franklin Phillips, Clk.:

Items.		M.H.Dale.	Mears & Flynn.
Paving, a sq. yd.		$1.77	$1.75
Curb: Straight	3,256 lin. ft.	.69	.68
With tile drain, a lin. ft.		.88	.89
Circular	157 lin. ft.	.98	.96
With tile drain, a lin. ft.		1.18	1.15
Resetting old, a lin. ft.		.24	.20

PUBLIC LIGHTING.—Dayton, O.—The following bid from the Dayton Electric Light Co. was the only one submitted April 10, 1899, for public lighting for five years. The company submitted two separate bids, one providing for 550 arc lights and one for 300 lamps. In this connection it is said that so far as the bid for 550 lights is concerned, it cannot be considered at all under the specifications, which provide for bids for 300 arc lamps and 200 additional in lumps of 50. The company in its bid under the proper specifications for 300 lights makes a bid of $89 a light a year. For the first 50 additional lights, $88 a light a year. For the second 50 additional lights, $87 a light a year. For the third 50 additional lights, $86 a light a year. For the fourth 50 additional lights $85 a light a year, and for all additional lights over 500 as above provided for, the sum of $85 a light a year will be charged.

SEWER MATERIALS.—Minneapolis, Minn.—The following bids were received April 15, 1899, for furnishing materials to be used in constructing sewers during the season of 1899; all local bidders except where stated: Castings—N. W. Foundry Co., $28 a ton of 2,000 lbs.; Crown Iron Works, $2.25 a hundred pounds; Menzel Foundry Co., $29.90; Gillette-Herzog Mfg. Co., $38.75 a ton of 2,000 lbs. Cement.—C. A. Proctor, Austin cement, cloth, 83 cts a bag, wood, $1.07 a bbl.; W. H. & Builders' Supply Co., Louisville cement, cloth, 87 cts.; wood, $1.04; J. C. Landers, Mankato cement, cloth, 82 cts.; Utica cement, cloth, 82 cts. Brick.—Menominee Hydraulic Pressed Brick Co., 1,000,000, $7.40 to $7.50 per M.; Wisconsin Red Pressed Brick Co., 1,000,000, $7.37 to $8.25 per M., and 100,000, feathered edge, $9.90 per M.; Swan G. Johnson, 200,000 at $8 per M.; E. R. Ward, 250,000, $7.30 per M. All of above are sand mold brick. Nicholas Erickson, 1,000,000 wire-cut brick, $6.25 per M. Clay Pipe—J. C. Landers: Laclede pipe, 6-in. 7¼ cts. a ft., 9-in. 14 cts., 12-in. 23½ cts., 15-in. 33 cts., 18-in. 45½ cts., 24-in. 85 cts.; 6×12-in. Ys, $1.10; 6×15-in. Ys, $1.50; 6×18-in. Ys, $2.00; 6×24-in. Ys, $3.00; 6-in. slants, 25 cts.; proposed branches, 2½-ft. long, f. o. b. cars.; Union Sewer Pipe Co., Red Wing, Wis., 6-in. 7½ cts. (2-ft. lengths), 9-in. 14 cts., 12-in. 23 cts. (3-ft. lengths), 15-in. 32 cts., 18-in. 45 cts., 24-in. 80 cts. (2½-ft. lengths), 6×12-in. Ys, $1.25 (3-ft. lengths; 6×15-in. Ys, $1.65; 6×18-in. Ys, $2.25; 6×24-in. Ys, $2.80 (2½-ft. lengths); 6-in. slants, 24 cts. (all lengths); Curves: 12-in. 80 cts (3-ft. lengths), 15-in. $1.25, 18-in. $1.50; 24-in. $2.50 (2½-ft. lengths); 12 lampholes, $1.35 each; 15 at $1.90 each; 18 at $2.75 each. Paving—J. B. Caning, furnished and set, 5×20 granite and 6×20 sandstone, granite straight curb, 77 cts. a lin. ft.; granite radius curb, 77 cts.; sandstone straight curb, 67 cts.; sandstone radius curb, 67 cts. (awarded contract).

BRICK PAVING.—Des Moines, Ia. —The following bids were received by the board of public works, April 10, 1899, for brick paving: 27th St., from Cottage Grove Ave. to University Ave., O. P. Herrick, gravel base, $1.15⅞; stone base, $1.24⅞; tile base, $1.19⅞; Iowa Brick Co., $1.24, $1.30 and $1.28 respectively. Alleys between Fourth and Fifth Sts., Court Ave. and Vine St., Fifth and Sixth, Mulberry and Walnut, Fifth and Sixth, Locust to Grand Ave., O. P. Herrick, gravel base, $1.14⅞; stone, $1.23⅞, tile, $1.18⅞; Iowa Brick Co., $1.30, $1.35 and $1.33; Likes Improvement Co., $1.09, $1.22 and $1.22. Depot St., from Third to Fifth, O. P. Herrick, gravel base, $1.24⅞; stone base, $1.30⅞; tile base, $1.26⅞; Iowa Brick Co., $1.31½, $1.37½ and $1.35½. Curbing Cherry, from Ninth to Eleventh, and Eleventh, from Mulberry to Cherry, Hugh Muller, 34 cts; Hugh King, 39 9-10 cts. 12-in. sewer from Center to School and 20th St., and south a distance of 257 ft., Herrick, $1.20; King, 83 cts., and John Hurley, $1.13 a lin. yd.

GRADE CROSSING IMPROVEMENTS.—Buffalo, N. Y.—The following bids were received April 11, by the Grade Crossing Commission for substructural work for grade crossing improvements at Elk St. and Abbott Road Viaduct; bid No. 1 is based on doing work according to specifications; bid No. 2 based on doing work with sections 143, 145, 146 and 148 of specifications omitted:

STONE WALKS.—Syracuse, N. Y.—The executive committee of the board of education has received the following bids for laying stone walks at the Washington School, the contract being let to Adam Nies, at 15 cts. a sq. ft.: Martin & Sullivan, 20 cts. for 9-ft. width, 18 cts. for 6-ft. and 17 cts. for 5-ft.; Chas. Thomas, 18 cts. for 9-ft. and 17½ cts. for 6-ft.

SPECIAL CASTINGS.—Boston, Mass.—The following bids were received by the water commissioner April 1, 1899, for furnishing 12,000 lbs. of No. 1, 30,000 lbs. of No. 2 and 5,000 of No. 3. composite castings. J. J. McCafferty & Co., $2,850, $6,862.50 and $800, total, $10,512.50; W. Curley, $2,370, $5,250 and $775, total, $8,395, awarded contract.

BIDS RECEIVED AT BUFFALO, N. Y., APRIL 11, 1899, FOR GRADE CROSSING IMPROVEMENTS AT ELK ST. AND ABBOTT ROAD VIADUCT.

Quantities.	Engineer's estimate.	W. F. Boysen, Nos. 1 & 2.	Christopher Smith, Nos. 1 & 2.	Harrer & Mitchell, Nos. 1 & 2.	A. P. Kehr No. 1.	A. P. Kehr No. 2.	Brown, Stabell & Griffiths, Nos. 1 & 2.	Williams, McNaughton & Papst, No. 1.	Williams, McNaughton & Papst, No. 2.	Chas. Mosier, No. 1.	The Donnelly Contracting Co., No. 1.	B. P. Smith, No. 1.	B. P. Smith, No. 2.	B. I. Crooker, Nos. 1 & 2.
Brick per M.	.....	$15.00	$14.00	$11.00	$15.00	$15.00	$16.00	$16.00	$16.00	$14.00	$13.20	$12.00	$12.00	$12.00
Concrete: Foundations, etc., nat. cement. 285 cu. yds.	$3.50	3.75	2.50	3.50	2.75	2.73	3.50	3.50	3.50	3.40	3.42	3.50	3.50	3.25
Sidewalks and abt curbing, nat'l cement 410 " "	3.50	3.75	2.50	3.00	2.75	2.73	3.25	3.60	3.60	3.40	3.42	3.50	3.50	3.40
Portland cement 3,569 " "	4.50	4.75	3.75	4.50	3.75	3.73	4.40	4.20	4.10	4.40	4.50	4.30	4.30	4.55
Crosswalks: Takn up (incldg sand & conc. 828 sq. ft.	.02	.05	.01	.03	.01½	.01	.01	.10	.10	.03	.02¼	.02	.02	.02
Relaid, including sand and concrete, a sq. ft.	...	.20	.12	.50	.40	.40	.23	.25	.25	.10	.15	.25	.25	.25
Relaid, including sand, a sq. ft.	...	.10	.10	.20	.25	.25	.14	.20	.20	.10	.12	.10	.10	.15
New, including concrete and sand 3,357 sq. ft.	.40	.30	.30	.55	.39½	.39	.35	.35	.35	.50	.38	.35	.35	.40
New, including sand, a sq. ft.	...	.25	.30	.25	.35	.35	.30	.34	.34	.50	.40	.30	.30	.32
Curbing to be taken up 2,568 lin. ft.	.02	.05	.01	.04	.01½	.01	.01	.03	.03	.01	.02¼	.02	.02	.02
Reset 699 " "	.10	.10	.07	.08	.08	.07	.08	.10	.10	.10	.11	.10	.10	.10
New work, exclusive of concrete 4,500 " "	.34	.45	.33	.33	.32½	.32	.32	.34	.34	.32	.38	.34	.34	.40
Excavation of solid rock, a cu. yd.	...	2.00	4.00	1.00	4.00	4.00	3.00	1.50	1.50	2.00	2.40	2.50	2.50	2.50
Loose rock, a cu. yd.	...	.90	1.75	.80	1.50	1.50	2.00	1.00	1.00	1.50	1.68	.75	.75	1.00
Earth, in foundation 7,370 cu. yds.	.40	.30	.28	.35	.29½	.29	.25	.33	.33	.40	.38	.30	.30	.34
Earth for new subgrade in streets 1,174 " "	.40	.30	.30	.30	.25	.24	.25	.33	.33	.40	.33	.30	.30	.30
Filling approaches and ramps to subgrade 17,245 " "	.30	.25	.15	.25	.30	.30	.20	.40	.40	.15	.28	.40	.38	.26
Cellars 81 " "	.40	.25	.20	.35	.30	.30	.20	.42	.42	...	.27	.40	.40	.26
Iron: Wrought 3,376 lbs.	.04	.02½	.04	.04	.04	.04	.04	.03	.03	.04	.03	.04	.04	.035
Cost, a lb.	...	.02½	.04	.02½	.02½	.02½	.05	.03	.03	.04	.06	.04	.04	.03
Pipe, 4-in., through walls 6 ft. below tap 385 lin. ft.	.30	.30	.50	.25	.35	.35	.50	.30	.30	.25	.38	.35	.35	.10
Manholes: New, 3-ft. high 3 each	30.00	15.00	30.00	10.00	10.00	10.00	13.00	22.00	22.00	8.00	12.32	15.00	15.00	4.50
New, 4-ft. high 3 "	30.00	16.00	35.00	12.00	13.00	13.00	15.00	24.00	24.00	8.00	15.40	17.00	17.00	6.00
New, 5-ft. " 4 "	30.00	18.00	35.00	14.00	14.50	14.50	17.00	24.00	26.00	10.00	18.48	18.00	18.00	7.50
New, 6-ft. " 1 "	...	19.00	38.00	16.00	16.00	16.00	30.00	28.00	28.00	10.00	23.52	19.00	19.00	9.00
New, 7-ft. " 1 "	35.00	20.00	38.00	18.00	16.00	16.00	21.00	29.00	29.00	[illegible]	24.64	20.00	20.00	10.50
New, 8-ft. " 1 "	...	20.00	40.00	20.00	20.00	20.00	40.00	30.00	30.00	15.00	30.24	22.00	22.00	20.00
New, 9-ft. " 1 "	40.00	25.00	40.00	22.00	20.00	20.00	25.00	31.00	31.00	15.00	30.80	25.00	25.00	25.00
New, 10 to 12-ft. high 1 "	40.00	28.00	45.00	25.00	28.00	28.00	30.00	33.00	33.00	20.00	36.96	35.00	35.00	35.00
New, 12 " 15-ft. " each	...	30.00	55.00	27.00	45.00	45.00	45.00	35.00	35.00	25.00	48.72	45.00	45.00	45.00
New, 15 " 18-ft. " "	...	35.00	65.00	30.00	60.00	60.00	49.00	37.00	37.00	30.00	58.80	50.00	50.00	55.00
New, 18 " 20-ft. " "	...	40.00	70.00	35.00	65.00	65.00	51.00	40.00	40.00	36.00	65.52	55.00	55.00	65.00
Rebuilt 69 lin. ft.	1.50	1.00	3.00	1.40	1.25	1.25	2.50	2.00	2.00	1.50	3.30	2.00	2.00	1.50
Masonry:														
10-in. coping, abutmts and approaches*. 11,667 sq. ft.	.70	.60	.75	.65	.69	.69	.65	.70	.75	.65	.76	.70	.70	.70
12-in. " abutments 169 " "	.75	.80	.75	.70	.60	.60	.65	.85	.85	.75	.81	.60	.60	.80
16-in. " on piers 611 " "	.75	1.00	.80	.90	.70	.70	.65	.85	.85	.90	1.00	.70	.70	1.25
12-in. " wheel guards, a sq. ft.	...	1.00	.80	.75	1.50	1.50	2.00	.85	.85	1.00	.96	.75	.75	1.50
Bridge seats or column bases 1,193 cu. ft.	.75	1.00	.80	.65	.60	.60	.65	.85	.85	.60	.76	.50	.50	.75
Fender posts 54 " "	1.75	2.00	2.50	1.30	1.90	1.90	2.25	2.50	2.50	1.00	2.75	1.90	1.90	2.00
Steps, Medina sandstone, a cu. ft.	...	2.00	1.50	2.00	3.00	3.00	2.50	2.00	2.00	2.00	1.00	1.50	1.50	1.50
First-class 357 cu. yds.	11.00	8.00	10.00	8.00	9.00	9.00	9.50	10.00	9.00	7.50	8.25	9.00	9.00	11.50
Second-class, retaining walls and ramps 6,074 " "	6.25	4.30	6.25	5.00	5.50	5.50	5.50	5.50	5.50	5.70	5.55	6.25	6.00	5.80
Third-class, retining walls, ramps, etc., a cu. yd.	...	3.50	6.00	5.00	5.50	5.50	4.50	4.00	4.00	5.50	4.08	4.30	4.30	4.75
Pavement, removed, including conc. base, a sq. yd.	...	.20	.25	.50	1.00	1.00	1.00	.25	.25	.50	.65	.25	.25	.30
Taken up, stone, including sand, a sq. yd.	...	.15	.25	.40	.70	.70	.60	.25	.25	.50	.45	.20	.20	.20
" stone alone 1,977 sq. yds.	.25	.10	.15	.10	.02	.01½	.01	.10	.10	.20	.11	.02	.02	.10
" asphalt, including conc. base 174 " "	.60	.20	.12	.50	.10	.10	.15	.25	.25	.05	.62	.30	.30	.25
" asphalt, excluding conc. base, a sq. yd.	...	.15	.12	.40	.28	.28	.75	.25	.25	.30	.36	.15	.15	.20
Relaid, Medina block, concrete base, a sq. yd.	...	1.50	2.00	2.25	2.25	2.25	3.00	2.40	2.40	2.50	1.50	2.00	2.00	2.25
Relaid stone on a sand base 95 sq. yds.	.50	.30	.25	2.00	.50	.50	.50	1.60	1.60	1.00	1.10	.50	.50	.60
New Medina block on concrete base 8,050 " "	2.70	2.40	2.00	2.35	2.60	2.58	3.00	2.60	2.40	3.40	2.70	2.37	2.37	3.45
" stone including sand, a sq. yd.	...	1.75	1.75	2.00	2.00	2.00	2.30	2.00	2.00	2.50	2.70	2.00	2.00	3.00
" stone alone, a sq. yd.	...	1.40	1.50	1.85	1.75	1.75	2.00	1.80	1.80	2.00	2.59	1.90	1.90	2.50
" asphalt, binder and concrete 1,719 sq. yds.	2.25	3.00	2.50	3.30	2.40	2.40	2.50	1.75	2.50	2.48	2.72	2.50	2.50	2.50
" asphalt, including binder 899 " "	1.75	1.75	1.75	2.00	1.75	1.75	1.60	2.20	2.00	1.75	1.92	2.00	2.00	1.80
Piling in foundation 9,026 lin. ft.	.25	.30	.30	.22	.24	.24	.25	.27	.27	.23	.24	.24	.24	.25
" cofferdam, a lin. ft	...	.30	.40	.25	.45	.45	.35	.27	.27	.26	.17	.25	.25	.35
" falsework, a lin. ft.	...	.30	.35	.25	.45	.45	.35	.27	.27	.26	.17	.25	.25	.35
Railing, iron, including posts specified 3,295 lin. ft.	1.95	2.00	1.95	1.90	1.87	1.87	1.90	2.00	1.86	1.80	1.95	1.75	1.75	1.95
Railing, c.-i. posts, addition to those shown 20 each	10.00	2.00	10.00	10.00	8.75	8.75	9.35	9.80	9.80	9.00	9.35	8.00	8.00	8.85
Receivers, new 10 "	35.00	40.00	35.00	40.00	32.00	31.00	35.00	35.00	35.00	44.00	49.50	35.00	35.00	35.00
Receivers, reset 5 "	15.00	15.00	8.00	15.00	7.50	7.50	15.00	20.00	20.00	25.00	27.50	10.00	10.00	15.00
Sewer and house conns.: New, 36-in. brick, a lin. ft.	...	5.00	4.00	3.00	3.75	3.75	3.50	3.00	3.00	3.00	3.48	3.50	3.50	3.50
New, 24-in. brick, a lin. ft.	...	4.00	3.00	2.25	2.75	2.75	3.25	2.50	2.50	2.50	2.88	2.75	2.75	3.00
" 18-in. tile, a lin. ft.	...	2.00	2.50	1.75	2.50	2.50	2.60	1.10	1.10	2.50	1.80	1.70	1.70	1.50
" 15-in. " "	...	1.25	1.50	1.55	2.00	2.00	2.40	.90	.90	2.00	1.62	1.25	1.25	1.25
" 12-in. " 25 lin. ft.	2.00	1.00	.75	1.00	1.08	1.06	2.00	.80	.80	1.50	1.34	1.75	1.75	.60
" 10-in. " 1,630 " "	1.00	.50	.70	.62	.60	.58	.80	.75	.75	.75	1.01	1.50	1.50	.40
" 9-in. " 176 " "	.75	.40	.60	.60	.58	.56	.80	.70	.70	.60	.73	1.35	1.35	.40
" 8-in. " a lin ft.	...	.35	.60	.58	.70	.70	1.75	.65	.65	.60	.73	1.00	1.00	.40
" 9-in. " 838 lin. ft.	.50	.25	.50	.50	.50	[illegible]	.40	.60	.60	.45	.56	.50	.50	.35
Relaid, 18-in. tile, a lin. ft.	...	1.50	2.25	1.00	2.00	2.00	2.60	.75	.75	2.00	1.38	1.35	1.35	1.00
" 15-in. " "	...	1.25	1.25	.90	2.00	2.00	2.40	.70	.70	1.75	1.32	1.10	1.10	1.00
" 12-in. " "	...	.75	1.00	.70	1.75	1.75	2.25	.65	.65	1.25	1.26	1.00	1.00	1.00
" 10-in. " "	...	.50	.75	.60	1.50	1.50	2.00	.60	.60	1.00	.96	.90	.90	.35
" 9-in. " "	...	.40	.70	.55	1.45	1.45	2.00	.55	.55	.75	.67	.85	.85	.35
" 8-in. " "	...	.30	.65	.45	1.40	1.40	1.75	.50	.50	.50	.62	.40	.40	.35
" 6-in. " "	...	.25	.60	.40	1.35	1.35	1.50	.40	.40	.50	.54	.35	.35	.30
Sidewalks, to be taken up, wood 7,830 sq. ft.	.00½	.01	.01	.01	.01	.01	.005	.01	.01	.00¼	.00½	.01	.01	.005
Taken up, stone, including sand 24 " "	.02	.05	.01	.02	.04	.04	.005	.02	.02	.01	.03½	.02	.02	.10
Relaid, wood, a sq. ft.	...	.05	.04	.10	.05	.05	.18	.15	.15	.10	.06	.10	.10	.10
Relaid, stone, including sand, a sq. ft.	...	.15	.04	.10	.10	.10	.23	.20	.20	.10	.10	.15	.15	.15
New, stone, 2 ins. sand 27,008 sq. ft.	.23	.23	.20	.22	.22	.22	.22	.23	.23	.21	.25	.25	.25	.23
New, stone, 6 ins. sand 8,652 " "	.25	.25	.23	.25	.24	.24	.25	.24	.24	.25	.26½	.30	.30	.26
Timber: Oak, per M. ft.	...	35.00	45.00	35.00	45.00	45.00	40.00	40.00	40.00	40.00	38.40	40.00	40.00	40.00
Pine, for sidewalks, etc., per M. ft.	...	25.00	35.00	25.00	30.00	30.00	30.00	35.00	35.00	20.00	33.60	33.00	33.00	30.00
Hemlock 55,176 ft. B.M.	16.00	15.00	20.00	16.00	15.00	15.00	16.00	18.00	18.00	15.00	18.70	18.00	18.00	15.00
Beach or maple per M. ft.	...	25.00	20.00	20.00	28.00	28.00	30.00	18.00	18.00	35.00	24.00	18.00	18.00	35.00
Pavemt: Asp., new, without 10-yr. guarantee 1,719 sq. yds.	...	2.75	2.50	2.50	2.35	2.35	2.25	1.55	2.40	3.30	2.45	2.50	2.50	2.20
Medina blk, new without 10-yr. guarantee 8,050 " "	...	2.25	2.00	2.30	2.47	2.47	2.75	2.60	2.30	2.30	2.55	2.35	2.35	3.35
Total	$131,184	114,780	116,995	118,323	118,465	118,034	122,787	124,998	123,914	127,010	128,037	128,713	126,849	132,629

*Medina sandstone.

WATER PIPE.—Lowell, Mass.—M. J. Drummond & Co., 192 Broadway, New York, have been awarded the contract for furnishing 700 tons of cast-iron water pipe at $22.41 a ton. The lengths will be 12 ft. each, and will have a pressure of 300 lbs.

BRIDGE ABUTMENTS.—Providence, R. I.—We are informed that the following bids were received April 7 for constructing abutments and wing walls at Mill St. and river wall south of Stevens St.:

Bids Received at Providence, R. I., April 7, 1899, for Construction of Bridge Abutments.

Quantities.		Nehemiah Kimball, Bridgeton, R. I.	Ross & Fowler, Ipswich, Mass.	Norcross Bros., Providence, R.I.	Fred'k E. Shaw, Providence, R.I.	T. H. Riddle, New Brunswick, N. J.
Excavation	1,960 cu. yds.	$0.35	$0.45	$0.76	$1.40	$1.75
Concrete in foundation	400 " "	4.00	4.00	3.76	2.50	4.50
Masonry in abutments and wing walls	625 " "	8.00	8.30	9.70	15.00	12.00
Rubble masonry in river wall	637 " "	4.00	5.50	5.98	5.00	7.00
Rip-rap.	80 " "	2.00	3.00	2.50	2.00	2.00
Old coping reset	30 lin. ft.	.20	.50	.25	.50	1.00
New coping	203 " "	2.00	2.50	4.60	2.00	3.00
Total		$10,406	$11,936	$13,987	$16,885	$17,988
Date of completion		July 31,'99	June 21,'99	Aug. 31,'99	Aug. 1, '99	Aug. 15,'99

WATER PIPE.—Chicago, Ill.—Bids were opened April 13, 1899, for supplying the city with 7,000 tons of cast-iron water pipe. Only two bids were received, and the successful bidder was the United States Cast-Iron Pipe Foundry Co. Its bid was $23.48 a ton, and advance of $7.50 over the price of last year. The bid of the American Pipe & Foundry Co. was $24.43. The pipe is to be ready for delivery in September. There are 372,000 ft. contracted for.

ASPHALT PAVING.—San Antonio, Tex.—The following bids were received by Mayor Hicks April 9, 1899, for asphalt paving in West Commerce St.: Municipal Improvement Co., excavation and 6 ins. of concrete, with 2½ ins. of natural rock asphalt, $2.35 a sq. yd.; lime stone curbing, 45 cts. a lin. ft.; sandstone curbing, 52 cts.; cement curbing, 44½ cts. A deduction of 30% is allowed if the city does the excavation itself. The same company also offer a bid of $2.15 a sq. yd. for asphalt, concrete and excavation if 4 ins. instead of 6 ins. of concrete is used. Trinidad Asphalt Improvement Co., excavation, a cu. yd., 28 cts.; asphalt, a sq. yd., $2.43; curbing, limestone, 42 cts.; curbing, sandstone, 55 cts. a lin. ft. The bids carry a guarantee of the work for five years.

WATER PIPE, LEAD, ETC.—San Juan, Porto Rico.—Col. A. S. Kimball, Q. M.'s Dept., Army Bldg., New York, received the following bids last week for furnishing for the water-works of San Juan, Porto Rico, 3,000 ft. of vitrified sewer pipe with fittings; 29,000 ft. of galvanized iron pipe with ells, nipples, tees, bushings and unions, etc.; 1,100 gate valves; 2,250 ft. brass pipe with fittings; 13,000 lbs. of lead pipe; 200 ft. waste lead pipe; 10,000 lbs. pig lead; 1,500 lbs. solder; air cocks, force pumps, service boxes, etc.: F. N. Dubois, 13,000 lbs. lead pipe, $1,382; G. B. Raymond & Co., 3,000 ft. vitrified sewer pipe, $820; Colwell Lead Co., galvanized

iron pipe, $10,467; brass pipe, $4,660; other pipe, $897; air cocks, $201; lead pipe, $1,266; Mason Mfg. Co., galvanized pipe, $8,685; brass pipe, $1,363; J. W. Buckley, force pumps, $6 each; Rumsey pumps, $27 each; Douglas pumps, $3.87 each; Pancoast & Rogers, galvanized pipe, $9,220; Chapman valves, $3,200; W. B. Douglas, force pumps, $10 each; 6-in., $24 each; Reynolds & Johnson, pipe, $1,364; H. R. Deville, solder, 14½ cts. a lb.; Randolf & Clowes, miscellaneous items, $885; Mayor, Lane & Co., sewer pipe, $990; galvanized pipe, $9,649; valves, $5,800; brass pipe, $1,450; Kennedy & Stannard, gate valves, $2,060; brass pipe, $950; LeRoy Shot & Lead Works, lead pipe, $1,360; McMann & Taylor, galvanized pipe, $9,349; gate valves, $3,408; brass pipe, $1,375; Cornell, Underhill & Boyd, galvanized pipe, $8,535; lead pipe, $2,080; brass pipe, $1,339; Chas. Hess, gate valves, $4,455; air cocks, $253.

ASPHALT PAVING.—Lafayette, Ind.—W. K. Eldridge, Cy. Engr., informs us that the following bids were received April 10 for asphalt paving:

Bids Received at Lafayette, Ind., April 10, 1899, for Asphalt Paving.

Bidder.	A cu.yd. [1]Grading.	A cu.yd. Gravel sub-base.	Dr'n til'g, pr ft.	Curbing St'ne pr ft.	Curbing Crclr piece	Sheet asph. pvg., s.yd.	Bl'k gutters, s.yd.	Gr'ding,[2] c.yd.	Asph. blk. pvg., s.yd.	Margin st'ns, pr ft.	Cement wlks, sq.ft.	Sodding, sq.ft.	South St., 2,886 ft. Per ft.	South St. Total.	Columbia St., 5,892 ft. Per ft.	Columbia St. Total.	So. 6th St., 3,726 ft. Per ft.	So. 6th St. Total.	No. 6th St., 4,080 ft. Per ft.	No. 6th St. Total.
Barber Asphalt Paving Co., Detroit, Mich...	$0.30	$0.70	$0.06	$0.75	$3.50	$1.95	$1.60	.....	.....	$0.45	$0.13	$0.01	$4.99	$14,401	$5.04*	$29,696	$4.93*	$18,369	$4.93*	$20,114
Central Bermudez Co., Indianapolis, Ind....	.20	.70	.05	.70	1.40	2.10	1.60	.....	.....	.35	.14	.01	5.12	14,776	5.22	30,756	5.22	19,450	5.09	20,767
Trinidad Asphalt Paving, Co., Cincinnati, O.	.25	.70	.10	.70	7.70	2.25	1.30	.....	.....	.40	.15	.02	5.58	16,104	5.66	33,349	5.61	20,903	5.44	22,195
Wm. F. Frey, Lafayette, Ind.	...	.55	.05	.73	5.94	....	....	$0.25	$1.95	.50	.12	.01	4.99*	14,401	5.06	29,814	5.11	19,040	5.05	20,604
Geo. W. Snyder, Lafayette, Ind.	...	...	.05	.85	9.62	....	....	.40	2.15	.50	.12	.02	5.87	16,940	....	......	5.90	21,983	5.88	23,990

*Awarded contracts. [1]Grading for sheet pavement. [2]Grading for block pavement.

RETAINING WALL.—Rockville, Conn.—The following bids were received April 13, 1899, for building a retaining wall on Market St.: R. R. Farrell, Jr., $7 a cu. yd., concrete foundation, and $6.50 a cu. yd. for wall masonry; W. B. Martin, $5.50, concrete foundation, $6 wall masonry; Jas. F. Fitzgerald, $6.21, concrete foundation, same for the wall masonry; O'Neil & Walsh, Hartford, $5, concrete foundation, $4.90, wall masonry; Hartford Paving & Construction Co., $6.36, concrete foundation.

DREDGING.—New York Harbor, N. Y.—Maj. H. M. Adams, U. S. Engr., Army Bldg., 39 Whitehall St., New York, informs us that Andrew Onderdonk, 1 Broadway, New York, submitted the only bid April 24, 1899, at 9 cts. a cu. yd., for 42,500,000 cu. yds. of dredging in the East Channel of New York Harbor. The specifications call for the construction of two dredges and the dredging of the channel to a width of 2,000 ft. and a depth of 40 ft. at mean low water.

BRICK PAVING.—Waukesha, Wis.—John P. Dey, Cy. Engr., informs us that the following bids were received April 14 for brick paving in Madison, Clinton and South Sts. and Broadway, as advertised in Engineering News; contract awarded A. Dieman, whose total bid was $22,328:

Bids Received at Waukesha, Wis., April 14, 1899, for Brick Paving.

Bidder.	Brick, on 6-in. concrete foundation, 14,000 sq.yds. Purrington.	Barr Clay.	Clinton.	Excavation, 4,850 cu.yds.	Filling, 115 c.yds.	Curb, 5,750 lin.ft.	Curb, Reset'g, 140 lin.ft.	Curb, Protect'n, 1,000 lin.ft.	C.-i. gutter bdgs, 228 lin.ft.	Catchbasins, New, 1.	Catchbasins, Rebuilt, 1.	Catchbasins, Covers, 1.	Lamphole cvrs, 3, each.
Aug. Dieman, Waukesha...	$1.31	$1.33	$1.32	$0.23	$0.50	$0.44	$0.08	$0.21	$0.45	$10.00	$10.00	$6.50	$2.00
E. W. Cahill, Waukesha...	1.32	1.32	1.32	.23	.50	.45	.09	.225	.45	10.00	10.00	6.50	2.00
G. Maffioli, Rockford, Ill...	1.34	....	....	.23	.50	.45	.05	.22	.45	25.00	10.00	5.00	2.00
J. Cape & Sons, Racine, Wis.	1.40	1.40	1.40	.26	.30	.42	.10	.28	.40	40.00	10.00	10.00	2.00
Reichert Const'n Co., Racine	1.40½	1.41½	1.40½	.28	.28	.47	.10	.22	.40	55.00	8.00	6.00	3.00
A. Kellner, Milwaukee....	1.42	1.42	1.42	.38	.38	.50	.15	.28	.45	18.00	10.00	4.00	2.00
A. E. Rutledge & Co., Rockf'd	1.34	1.35	1.35	.20	.30	.44	.08	.18	.45	26.00	15.50	9.50	2.00
Smith, Moss & Brown, Chicago	1.38	1.39	1.39	.30	.50	.46	.20	.25	.50	30.00	10.00	6.00	3.00

WATER PIPE, ETC.—Minneapolis, Minn.—The contract was let last week to the U. S. Pipe & Foundry Co. for the 16-in. cast-iron pipe at $24.90 a ton of 2,000 lbs. The contract was awarded to the Eddy Valve Co., for 10 16-in. valves, taper seat, at $61.11 each.

BRICK PAVING.—Bedford, Ind.—J. E. Voorhees & Co., Terre Haute, Ind., have been awarded the contracts at $2.84 a lin. ft. for paving a portion of 13th St. with Terre Haute repressed brick, and at $2.80 for a portion of 14th St.

STREET SPRINKLING.—Saratoga Springs, N. Y.—Gailor & Vandenburg have been awarded the contract for street sprinkling from June 1 to Oct. 1 each year for four years, at 13-16 cts. a sq. yd. Smith W. Robbins bid ⅞ cts. a yd.

BRICK PAVING.—Portland, Ind.—A. J. Frost, Cy. Engr., informs us that the following bids were received April 17, 1899, for 25,000 sq. yds. of brick paving; the bid includes sandstone curbing, a 24-in. sewer in center of street, catchbasins, manholes, and everything complete; contract was awarded Philip Hipskind:

Bidder.	Metropolitan block, a sq. yd.
Elsworth Brentlinger, Dayton, O.	$1.83
Philip Hipskind, Wabash, Ind.	1.54
W. W. Hatch & Son, Goshen, Ind.	1.865
E. Wood & Co., Decatur, Ind.	1.71
Fisher, Helfer & Baley, Huntington, Ind.	1.695
Sullivan & Graham, Columbus, O.	1.76
Matthersen & Kloat	1.80
J. A. Foster & Co., Attica, Ind.	1.695
Yeager & Dickerson, Danville, Ill.	1.96
C. E. Mellering & Co., Fort Wayne, Ind.	1.60
A. L. Jaqua, Portland, Ind.	1.58
Grubbers, Garvey & Co., New Castle, Ind.	1.85
Porter, Bowling & Hadley, Tipton, Ind.	1.765
John W. Lalley, Portland, Ind.	1.62
Wm. Smith & Co., Indianapolis, Ind.	1.79
O'Brien & Deharity, Elwood, Ind.	1.64

CITY SUPPLIES, ETC.—Reading, Pa.—The board of public works April 13, 1899, received the following bids for supplies and general work in the department of highways and sewers: Black sand, a ton—A. Lincoln Frame, 45 cts; F. C. Kretz, 44 cts.; Paving gravel, a ton—John Gallagher and F. Brisse, 50 cts.; Spalls, a ton—Chas. H. Fisher, 90 cts.; Wm. M. Fulton, 84½ cts.; Screenings, a ton—C. H. Fisher, 90 cts.; W. M. Fulton, 84¼ cts.; North River curb stones, a lin ft.—J. K Faust, 45 cts. for 20x4-in., 78 cts. for 24x6-in.; Granite blocks, a 1,000—J. E. Wagner, $4.45; Vitrified brick, a 1,000—A. A. Gery, $11; Reading Shale Brick Co., $11.25; Vitrified brick for sewer construction, a 1,000—A. A. Gery, $8; Reading Shale Brick Co., $7.25; Reading Scale & Machine Co. $8.25; Iron box top culverts, a lb.—Reading Scale & Machine Co., 1¼ cts.; Davis, Printz & Co., 1⅝ cts.; Cast-iron work for sewer construction, a lb.—Reading Scale & Machine Co., 1 7-16 cts.; Davis, Printz & Co. 1⅝ cts.; Cast-iron scrap, a lb.—Reading Scale & Machine Co., ½-ct.; Davis, Printz & Co., $10 a gross ton; Am. Portland cement, a bbl.—Hoff Bros., $1.90; A. L. Roth, $2.15; Natural cement, a bbl.—Hoff Bros., 90 cts.; A. L. Roth, $1.10; Sand for disposal plant, a ton—A. L. Roth, 89 cts.; O. S. Geiger, 95 cts.; D. C. Geiger, Bordentown 90 cts., Delaware Bar 87 cts.; Digging and new paving and repaving old sidewalks, a sq. yd. —E. J. Riske, 77 cts.; H. Roland, 77 cts.; F. Gable, 78 cts.; Cleaning asphalt, asphalt block and vitrified brick paved streets, a sq. a month—Faust & Kachel, 1 year, $15.23, 3 years, $15.03; Hawman Bros., $15.25, $13.75; G. W. Andrews, $14.15, $13.25; J. H. Dierolf, $16.85, $16.50; Rhoads & Nunemacher, $17.70, $17.44; H. S. Hartman, $15.94, $14.94; A. L. Frame, $10.40, $9.60; G. Ritner, $16.20, $15.94; F. E. Aulenbach, $15.23, $14.98; J. Hartman & Co., $16.00, $15.50; J. H. Eltz, $16.93, $16.22; Martin & Kline, $15.35, $14.95; G. W. Keim, $15, $15; C. N. Fisher, $15.75, $15.50; J. E. Weidner, $16.19, $15.94; F. S. Keller, agent, $14.50, $14.50. For cleaning southwest sewer, catchbasin and inlets, a month—G. Ritner, $144; H. Hartman, 168.30; A. L. Frame, $124.50; A. P. Lease, $130.50; W. R. Krick, $175; A. Kauffman, $145.

BRICK AND GRANITE PAVING.—Petersburg, Va.—The following bids were received April 15, 1899, for 12,300 yds. of brick, and 2,300 yds. of granite paving, as advertised in Engineering News; the bids include tar filler; contract will be let April 27; (1) being for Porter wire-cut brick, (2) Porter repressed brick, (3) Porter block, (4) Mack wire-cut brick, (5) Mack repressed brick, (6) Mack block, (7) Portsmouth, (8) Savage, (9) Clearfield, (10) Kentucky, (11) Chilhowie, (12) Townsend, (13) Montello, (14) Spilman, (15) deduct if sand filler is used, (16) granite block, (17) deduct if sand filler is used: Middendorf & Weinbrunn, Richmond, Va., (1) $2.46, (2) $2.55, (3) $2.52, (4) $2.57, (5) $2.71, (6) $2.37, (9) $2.52, (12) $2.57, (15) 23 cts., (16) $2.55, (17) 25 cts.; Virginia Paving Co., Lynchburg, Va.. (11) $2.12, (15) 13 cts.; J. T. Tallafard & Co., Richmond Va., (1) $2.49, (2) $2.56, (3) $2.53, (6) $2.66, (7) $2.71; John Jacoby, Wilmington, Del., (2) $2.31, (3) $2.33, (8) $2.32, (9) $2.33, (13) $2.23, (15) 9 cts., (16) $2.80, (17) 20 cts.; Hamilton & Irvin, Fairmount, W. Va., (6) $2.18, (7) $2.09, (8) $2.12, (10) $2.09, (14) $2.14, (15) 7 cts., (16) $2.38; Charles Gasser, Richmond, Va., (1) $2.27, (2) $2.31, (3) $2.37, (6) $2.40, (9) $2.31, (16) $2.33.

INDUSTRIAL NOTES.

THE AMERICAN WOOD-PRESERVING CO., Philadelphia, has removed its offices from 1015 Filbert St. to 806 Chestnut St.

THE BERLIN IRON BRIDGE CO., East Berlin, Conn., announces its sixth annual oyster roast given to its employees and their families, as to take place Wednesday evening, April 26, at 6 p. m.

THE ABENDROTH & ROOT MFG. CO., New York, manufacturers of the Root improved water-tube boiler and Root's spiral riveted pipe, will remove May 1 from 28 Cliff St. to the sixth floor of the new building at 99 John St.

THE EASTERN SOLAR GAS MACHINE CO., New York, have removed its office from 52 William St. to 120 Liberty St. The company has added to its manufacture of acetylene gas generators a newly-developed machine called the Simplex.

THE GOHEEN MFG. CO., Canton, O., reports that its 1899 business is much in excess of that for the same period of any previous year. The company has been obliged to enlarge its plant to keep up with the demand for its protective coatings for structural work.

THE LLOYD-TALMAGE CO., New York, has succeeded A. A. Talmage & Co. and the Greater New York Supply Co. Mr. H. A. Lloyd, the president of the new company, was until April 17 the assistant secretary and general claim agent of the Wabash R. R. The executive, legal and engineering departments are located at 29 Broadway, the machinery, hardware and general supply departments at 33 Barclay St. and 38 Park Place.

F. H. BULTMAN & CO., 106 and 108 Canal St., Cleveland, Ohio, successors to the Superior Machine Co., have just received an order from the Wesselman Machinen Gessellschaft, Berlin, Germany, for six Superior automatic gear cutting machines, to cost $5,000. The General Electric Automobile Co., Philadelphia, Pa., has also ordered one of the same type of machines. The first-named company reports a very good business from other sections.

THE NITRO-POWDER CO., Kingston, N. Y., has been awarded the contract for all dynamite to be used by Belden & Seely in connection with the excavation of the hydraulic canal for the St. Regis Paper Co., near Watertown, N. Y. The work will include about 200,000 cu. yds. of rock excavation. The total bids received April 13 for constructing the canal were published April 20 under our department of Electric Light and Power, the contract being awarded to Belden & Seely, of Syracuse.

THE POTTER MFG. CO., Indianapolis, Ind., is making a specialty of a screw sewer brace, which has a dog or lug on each end, hooking over the top of the sheet piling. This prevents the brace from dropping into the trench when slackened for removal or by the spreading of the sheeting. The screws are of steel, with a heavy double thread, and the nuts or handles are drop forgings. In trenches up to 6 or 7 ft. in width a 1½-in. screw is used, but for wider trenches a 1¾-in. screw is recommended. The brace itself may be a timber or a piece of steel pipe, enclosing the screw.

NEW COMPANIES.—Lyons Telephone Co., Lyons, N. Y.; $500; to connect Auburn with various villages in Cayuga, Wayne and Seneca counties; S. E. Bishop, Clyde; E. G. Bishop, Rhinebeck; C. H. Towlerton and Clyde W. Knapp, Lyons.

C. E. Loss & Co., Chicago, Ill.; $100,000; general contracting business; Frank S. Reeves, Francis W. Riddle.

Illinois Powder Co., Chicago, Ill.; $100,000; to manufacture powder; George T. Cutts, A. J. Moorhead.

Miller Electrical Maintenance Co., Camden, N. J.; $100,000; general electrical business; J. J. Miller, Pittsburg; James R. Baird, Allegheny; W. C. Thoma, Pittsburg, Pa.

Home Telephone Co., Dayton, O.; $100,000; H. C. Kiefaber, F. G. Mithoft and Albert Emanuel.

Ohio Clay Mfg. Co., East Liverpool, O.; $100,000; brick sewer pipe and tile.

Acker Process Co., Jersey City, N. J.; $3,000,000; to manufacture caustic soda, chloride of lime, etc.; Edw. F. C. Young, Jersey City; Samuel H. Guggenheimer, New York; Chas. E. Acker, East Orange, N. J.

Concrete & Asphalt Paving Co. of the State of New York, Brooklyn, N. Y.; $50,000; Noah Cocheu, Lewis R. Stegman and William J. Trimple.

Green River Construction Co., Seattle, Wash.; $30,000; railway construction; W. E. Guerrin, John S. Govey.

Columbia Automobile Co. of New York, Jersey City, N. J.; $3,000,000; William B. Greeley, New Rochelle, N. Y.; Charles A. Mendell, New York; Linley M. Garrison.

Maritime Improvement Co.; $3,000,000; to build canals, docks and construct electric light, gas, telephone and telegraph plants; Charles H. Cramp, Philadelphia; Gustav Lindenthal, New York; E. F. C. Young, Jersey City.

Sargent Automatic Railway Signal Co.; $2,000,000; railway semaphore signals; James Sargent, John D. MacMaster, E. B. Fenner.

Birmingham Cement Co., 55 Montgomery St., Jersey City, N. J.; $300,000; to manufacture cement; Samuel B. Lawrence, 13 Astor Place, New York; Henry M. Haviland, 19 Whitehall St., New York; George E. Spencer, 137 Amity St., Brooklyn, N. Y., and others.

New England Electric Vehicle Transportation Co., 1 Montgomery St., Jersey City, N. J.; $25,000,000; vehicles to be operated by electricity, compressed air, etc.; James E. Hays, 361 Market St., Camden, N. J.; Arthur Phillips and Aug. Treadwell, Jr., 36 Wall St., New York.

Empire Construction Co., 558 Park Ave., East Orange, N. J.; $50,000; general construction business; William P. Catlin, New York; Thomas T. Hill, Brooklyn, N. Y.; George L. Catlin, East Orange, N. J.

Harrison Construction Co.; $100,000, commencing with $5,000; to construct and manage public and private works, including railways, canals, water and electric light plants, etc.; Lewis B. Harrison, Charles H. Slocomb and Charles F. King, 745 Broad St., Newark, N. J.

Gurney Street Sweeping Co.; $100,000; to manufacture street cleaning apparatus; Edward L. Dougherty, Ferdinand von Kusserow and Peter Whitney, all of New York, with office at 1 Montgomery St., Jersey City, N. J.

Seattle & San Francisco Railway & Navigation Co., Seattle, Wash.; $3,000,000; railways, navigation lines, telegraphs, telephones, etc.; John Leary, R. F. Guerin.

Standard Gage Mfg. Co., Syracuse, N. Y.; $25,000; Louis Will and W. G. Holbrook, Syracuse; M. M. Lawler.

Seaboard Contracting Co., New York; $100,000, commencing with $50,000; William G. Burke, C. C. Day, New York; H. E. Wright, Jersey City, N. J.

American Railway Equipment Co., Jersey City, N. J.; $100,000; Kenneth K. McLaren, Wm. H. Brearley, Harry W. Meen.

Archipelago Exploitation Co., Jersey City, N. J.; $50,000; to deal in mining properties, etc.; M. L. Muhlman, John D. Elwell, George W. Marlor.

Automatic Elevator Valve Co., North Paterson, N. J.; $100,000; William G. Nixon, E. Aug. White, New York; Robert B. Dunlop, North Paterson, N. J.

Kyle Automatic Co., Buffalo, N. Y.; $2,000,000; to engage in the filtering of water and the manufacture of machines for that purpose; Chas. E. Loane, Brooklyn; Milton O. Hoffman, D. J. Bushnell, New York.

People's Telephone Co., Grinnell, Ga.; $100,000; J. H. Phillips, E. Dean Fuller, N. E. Coffin.

Carolina Investment Co., Norfolk, Va.; $50,000; construction and contracting; Benj. Newgass, Pres., London, Eng.; Henry S. Haines, Vice-Pres., New York.

Columbia Electrical & Repair Co., Astoria, Ore.; $10,000; to deal in mechanical and electrical apparatus, etc.; C. B. Hawthorn, A. Welch, S. T. Harrison.

Western Pennsylvania Brick Co., Pittsburg, Pa.; $3,000, commencing with $300; Xavier Witmer, Grant Diebert, Evan Jones, all of Allegheny, Pa.

Knickerbocker Automatic Machine Co., Albany, N. Y.; $50,000, commencing with $10,000; coin controlling devices; Wm. P. Shaw, Henry Bronk, E. B. Toldt.

Atlantic Tube Co., Camden, N. J.; $250,000; to manufacture metallic tubes, etc.; Grant McCargo, E. H. Jennings, E. Rogers Kemp.

Linesville Telegraph & Telephone Co., Linesville, Pa.; $6,000; R. P. Reidenbach, Frank E. Bunday, Charles S. Gehr, Linesville, Pa.

Acme Construction Co., Des Moines, Ia.; $3,000; telephone lines; J. W. Lobb, F. M. Beach, C. M. Chittenden.

Iowa County Mutual Telephone Co., Marengo, Ia.; $2,000; C. C. Kiel and others.

Mail Delivery Notice.

Special efforts are made to deliver our paper to its readers each week at the earliest possible moment. The largest binding and mailing establishment in New York begins work on Engineering News early each Wednesday evening, and all papers for Boston, Philadelphia and Washington are usually in the New York postoffice by midnight; all Brooklyn and New York city papers by 3 o'clock—in ample time for the first delivery Thursday morning. The entire edition, including foreign copies, is in the mail soon after 6 o'clock Thursday morning. If your paper is not received promptly we advise that you make a complaint to your local post-office officials.

Nearly Every Prominent Contractor and Manufacturer of Contractors' Supplies READS ENGINEERING NEWS